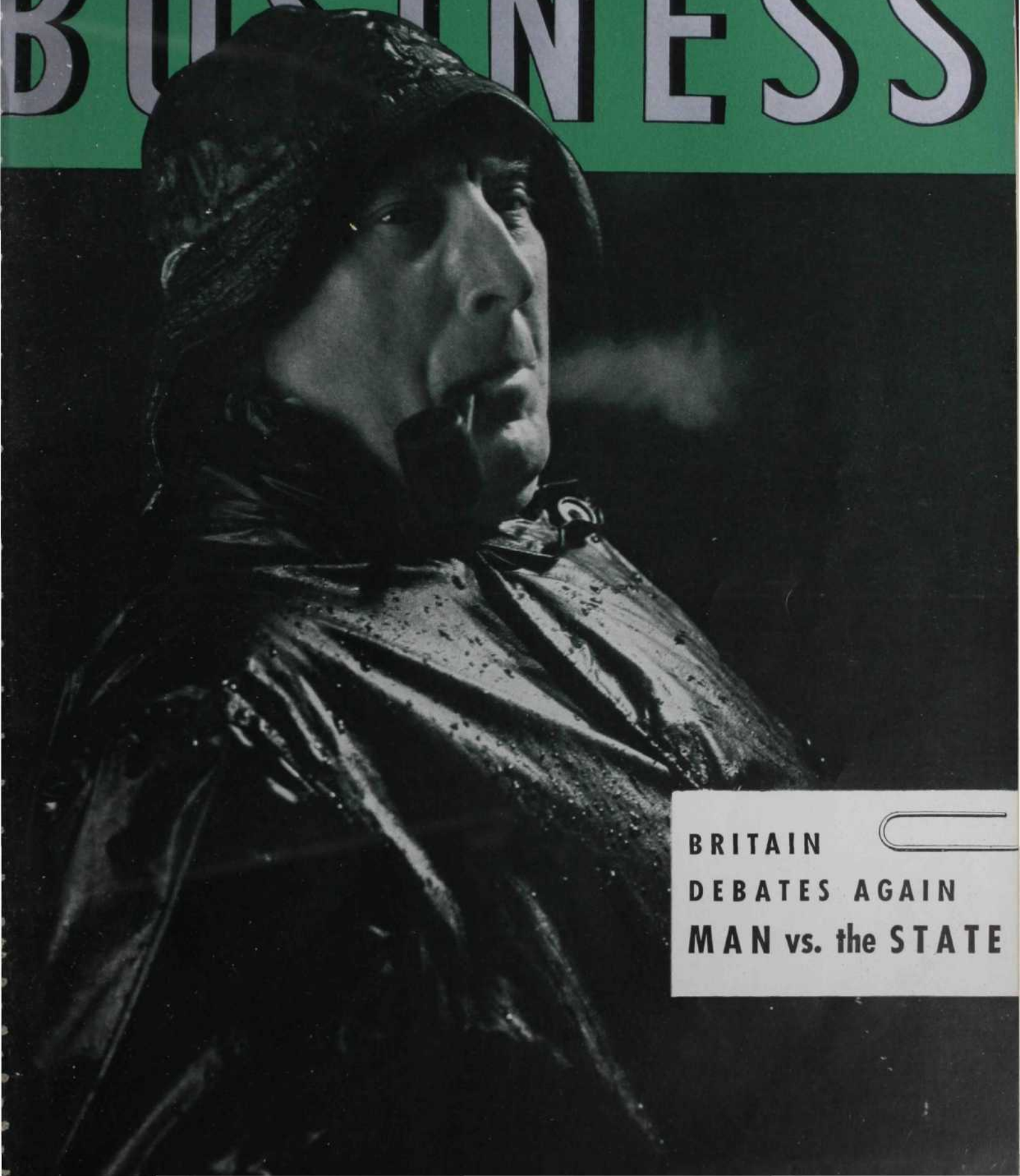
August

NATION'S BUSINESS

1943



BRITAIN DEBATES AGAIN MAN vs. the STATE



One of a series illustrating Cyanamid's many activities.

The Silent Call for Help

The task of finding a needle in a hay-stack has its counterpart on the water too—in locating and rescuing aviators forced down at sea. If you have never tried it, you have no idea how difficult it is to spot, from high in the air, a man in a life jacket or on a rubber raft—a tiny speck on a vast expanse of trackless ocean.

But—provide the downed pilot with a *"Life Jacket Dye Marker"* and he becomes a center of focus. This our Government has done. For a standard part of every aviator's equipment is the *"Dye Marker,"* a special water-proof kit containing a packet of dyestuff. When this kit is ripped open, the dye packet is released and instantly over the surface of the sea spreads a brilliant yellow-green spot, visible for many miles.

This life-saving unit, developed by Cyanamid's Calco Chemical Division, in collaboration with the Army and Navy, is a daytime beacon—the visible call for help to friendly plane or rescue vessel.

Calco uranine, also known as sodium salt of fluorescein, is the dye used in these markers. It is also used in similar safety equipment for the rubber life rafts carried on our planes and the life boats on our ships. The adaption of this dye to such a useful purpose is typical of Cyanamid's skill in making organic chemicals to fit America's needs of the moment.

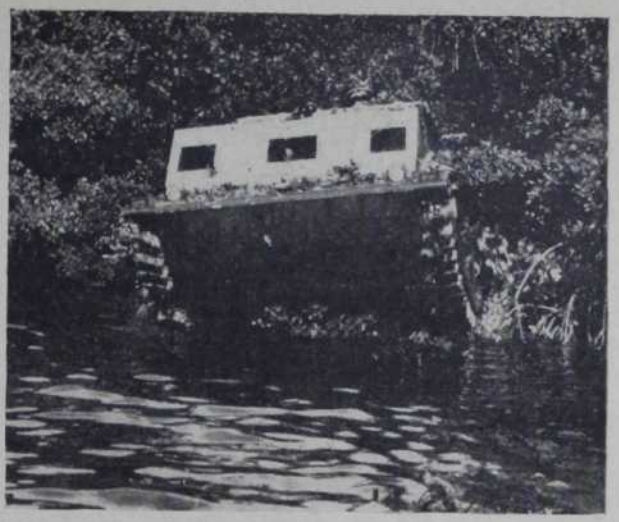
Many of these uses resulting from the urgency of war are destined to bring new safety and efficiency to the peacetime progress and commerce of tomorrow.

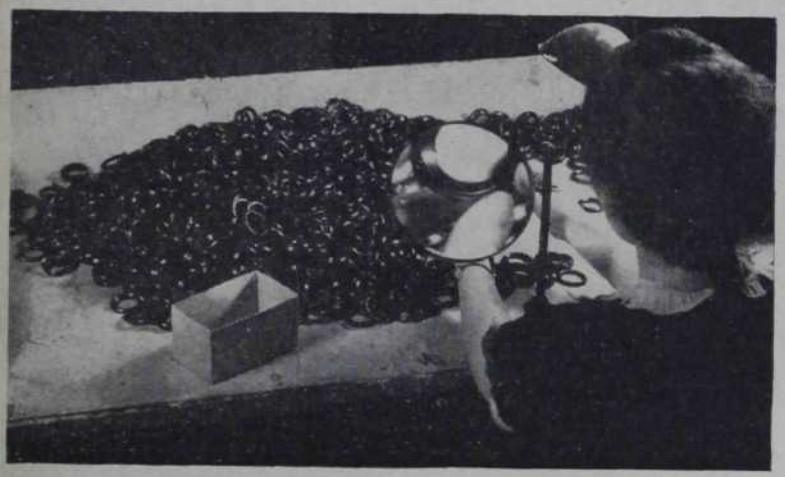
American
Cyanamid Company

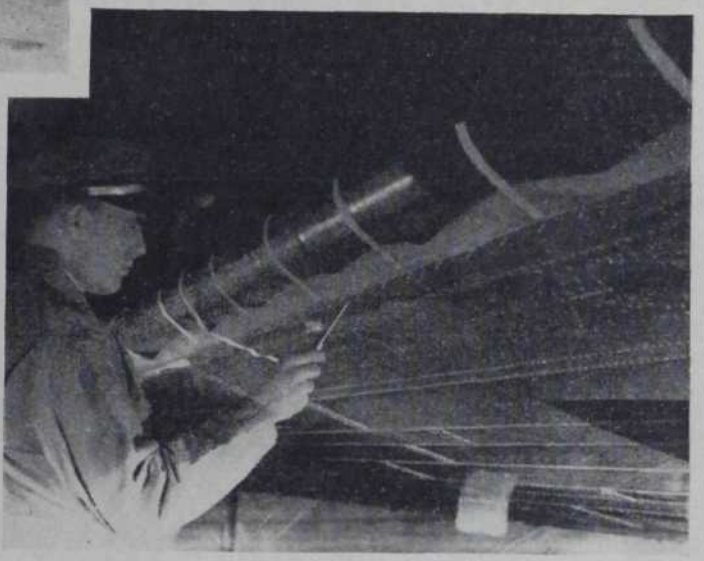
30 ROCKEFELLER PLAZA, NEW YORK, N

MOLDING THE FUTURE THROUGH CHEMISTRY









A million pounds of rubber products every day — and 7 "E" awards

A typical example of B. F. Goodrich improvement in rubber

IN THE picture in the lower corner are little rings of synthetic rubber being inspected under a powerful glass. Some rings like these are large and some are so small you could hardly put the point of a pencil through them, several thousand weighing only a few pounds. Yet all are necessary hydraulic seals in war planes.

From these up to rubber pontons so big they can support bridges, there are more than a thousand distinct types of rubber war products — and for speed in producing them plus other accomplishments, men and women at seven B. F. Goodrich plants have received the Army-Navy "E" award. The output of these plants has averaged far beyond a million pounds a day of finished rubber war products, plus big tonnages of war goods not even made of rubber.

Some of the products made in these plants are original B. F.. Goodrich developments—such as rubber springs for the "centipedes that swim," tanks that can travel on land or water (photo, upper right); "square tires," the endless band tracks for the army's half-track vehicles (upper left); airplane De-Icers (lower right); also V-belts for powder and chemical plants, made of rubber that can conduct electricity, thus preventing sparks that might blow up the whole place; rubber bearings for ships; Koroseal insulation for battleship cable — and other things we don't even have space enough to mention. In some cases the "developments" are improvements in familiar products or faster manufacturing methods.

The Army-Navy "E" is awarded for excellence in the production of war materials. It has been awarded at B. F. Goodrich plants in California, Kentucky, Massachusetts, New York, Ohio, Tennessee and Texas. *The B. F. Goodrich Company, Akron, O.*

B.F. Goodrich

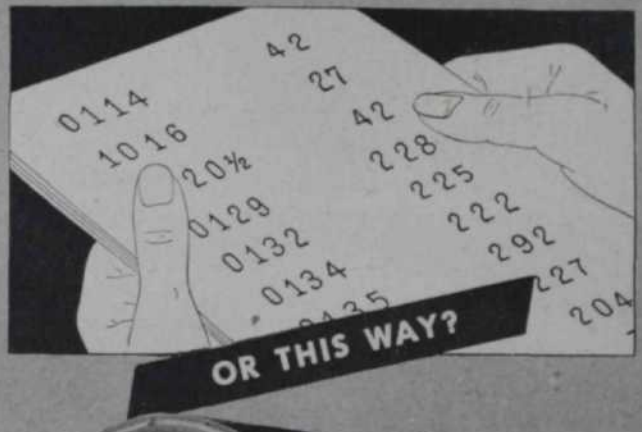
RUBBER *and* SYNTHETIC *products*



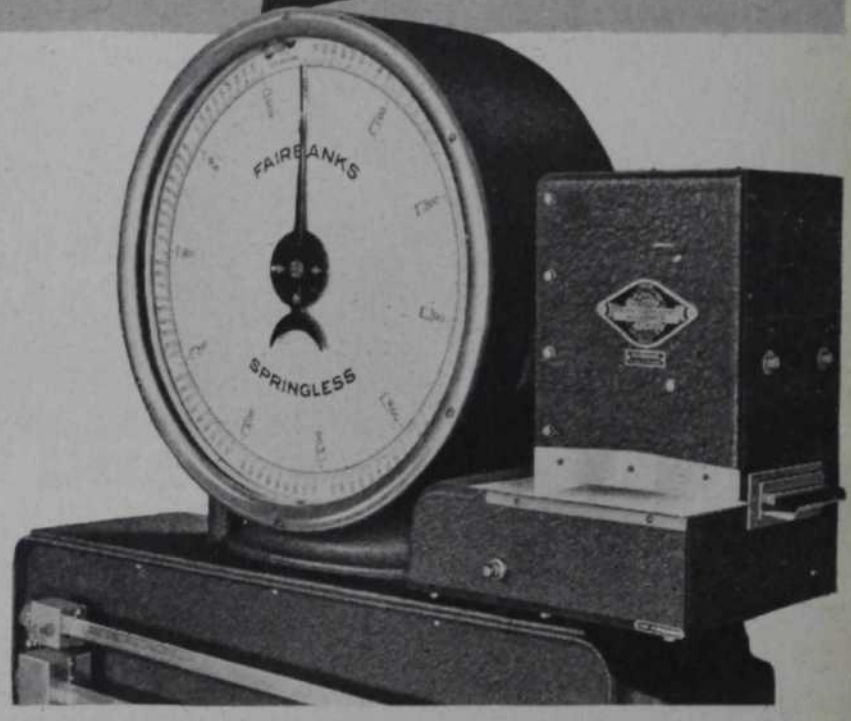
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How Are Weight Records Made In Your Plant—





For precision weighing and precision recording use *FAIRBANKS SCALES* with *PRINTOMATICS*



• Of course, *sustained accuracy* in the weighing machine is vitally important. But no matter how accurate the machine is, unless weights are *accurately recorded,* the element of error still remains.

Fairbanks Scales with Printomatics eliminate these human errors—because the scales read the weight automatically and then automatically make a *printed* record of the weight. In addition to eliminating errors, Fairbanks Scales can be fitted into your production flow to do a variety of jobs better than they can be done in any other way. Fairbanks Scales weigh loads in motion . . . count small parts . . . record the flow of liquid chemicals . . . guard secret formulas in compounding . . . control batching . . . automatically control ingredients . . . automatically control aggregates . . . and many other jobs.

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RAILROAD EQUIPMENT

Scales

GIVE HIM A BREAK!



Evening is about his only chance to telephone home. He can get through easier if the wires aren't crowded — and his calls mean so much to him and the home folks. So please don't call Long Distance between 7 P. M. and 10 P. M. unless your calls are really necessary.

Many thanks.

BELL
TELEPHONE
SYSTEM

The Successful Executive of the Future Must Be Aggressive, Cost Conscious and Selling Minded



BUY MORE WAR BONDS

"You've Got to Spend Money to Make Money"

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OFFICES IN PRINCIPAL CITIES

Nation's Business

CHAMBER OF COMMERCE OF THE UNITED STATES

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Cover photograph—Captain "Bob" Bartlett by Steichen—Courtesy Condé Nast Publications

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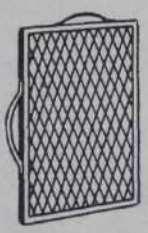


Flying BOXCARS RUSH AAF FILTERS TO OUR FIGHTING FRONTS

AAF airplane engine filters are but one of hundreds of necessary items ranging from medical supplies to thread and needles — that get the call when a flying "boxcar" is loaded with critical freight for United Nations' forces.

These important filter units are a big part of our production today, but we are continuing also with the complete line of air filtration and dust control equipment designated by Uncle Sam as vital to the war effort.

Send for free booklet, "AAF In Industry".



AIRPLANE FILTERS FOR THE FIGHTING FRONT

Military planes operating from dust choked front line air fields must be filter equipped if air superiority is to be maintained. AAF engine filters keep 'em flying 10 times as long!

ELECTRO-MATIC FILTER FOR ATMOSPHERIC DUSTS

Combines automatic air filtration and electrical precipitation to obtain the highest efficiency in the removal of atmospheric dust and smoke.





ROTO-CLONE COLLECTOR FOR PROCESS DUSTS

Combines exhauster and dust collector in a single, compact unit. Eliminates extensive piping—reduces installation costs. Comes in a wide range of sizes for all industrial needs.

Please send descriptive booklet "AAF in Industry".

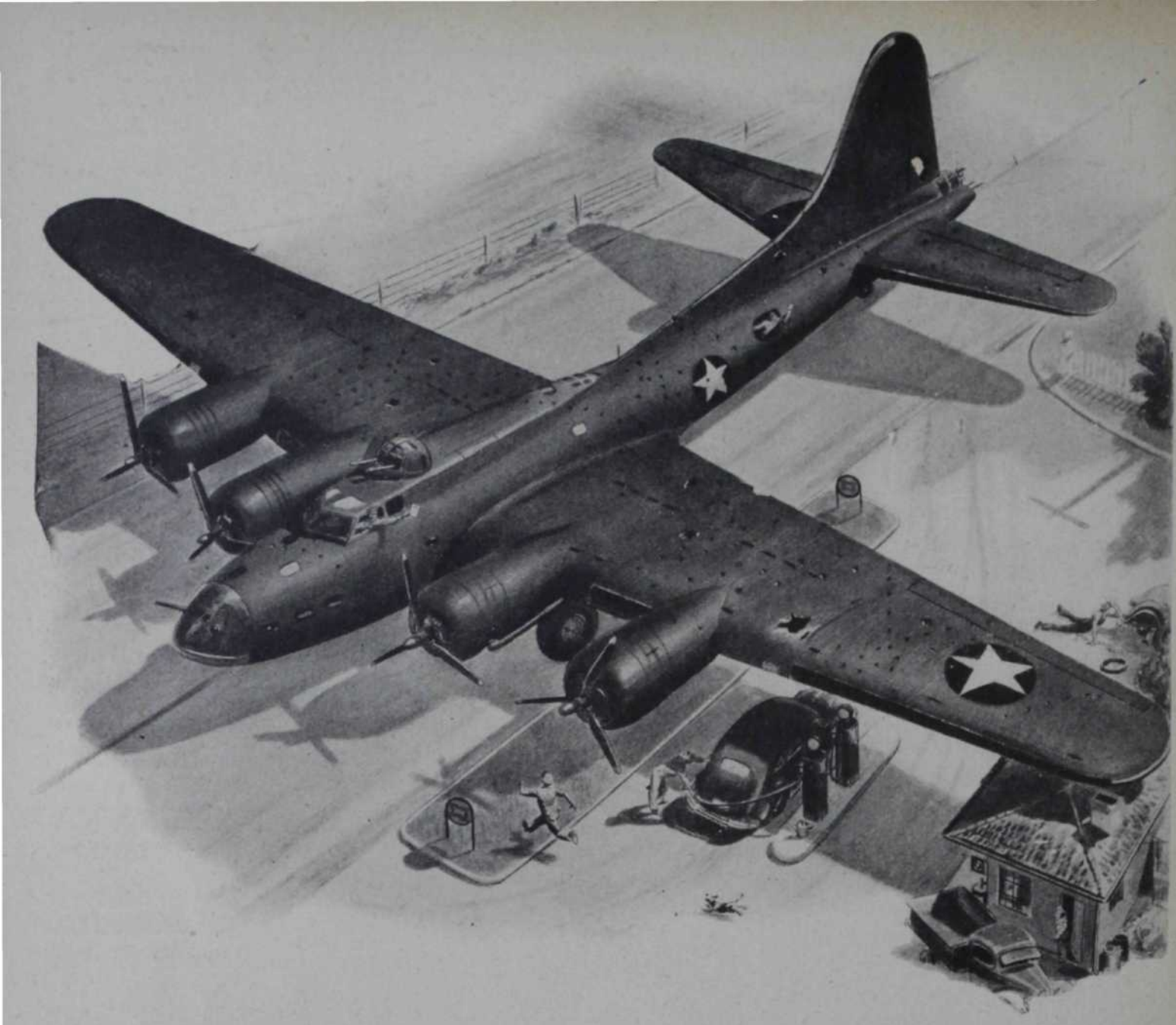
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Firm_____

City_____ State_____

AMERICAN AIR FILTER CO., INC.
109 Central Avenue
LOUISVILLE, KY.

AAF



AN A BOOK FOR A BOMBER?

Can you imagine a B-17E, flecked with flak, skidding into the local gas station and asking for "three gallons, please," and adding the request "high-test if you have it"?

Ridiculous as the picture is, 100 octane "flying" gasoline would be a very restricted item but for refrigeration.

And when you consider that refrigeration, essential in the sulphuric acid-alkylation process, is a vital factor in from 75 to 80 per cent of the total production of flying gasoline, you can thank your *very* lucky stars that York, and those other great manufacturing concerns who make industrial refrigerating machinery, were ready for the war when it came.

As you can see by the papers, American flyers are getting the gas . . . and making good use of it. York Corporation, York, Pennsylvania.

YORK REFRIGERATION AND AIR CONDITIONING FOR WAR

HEADQUARTERS FOR MECHANICAL COOLING SINCE 1885



SOLUTION—

Perforated Ceiling Stops Noise Reflection

Clattering dishes and a hubbub of voices are not conducive to pleasant dining. Restaurants have long sought a means of eliminating the noise, yet both dishes and voices must be present in every restaurant.

Burgess engineers found that it wasn't the noises themselves which were so annoying; it was the reflection of these noises from ceilings and walls. By using sound-absorbent ceilings, they could cut down this reflection and make the restaurant noticeably quieter.

They developed efficient ceilings for this purpose, of perforated metal sheets backed with a thick blanket of sound-absorbent material. This patented Burgess construction has since been used by many building supply companies for sound treatment of restaurants, offices, and other public places. When steel is again available, many more of these ceilings will be installed.

BURGESS PIONEERING in acoustic development has provided many other quieting devices to aid the war effort. Over 20 years' experience has made it possible for the Acoustic Division to successfully engineer products ranging from acoustic telephone booths to engine exhaust silencers. Why not write us of your noise difficulties? Acoustic Division engineers may already have worked out the solution to your problem.

BURGESS *Acoustic* **DIVISION**

Acoustic Division, Burgess Battery Co., 2817-P W. Roscoe St., Chicago

Through the Editor's *Specs*

Hot weather humor

SOMEHOW the news leaked out a little while back that the War Department's Traffic Division has a "Frustrated Freight" section. Items to this effect kept popping up in the public prints, and a Washington newspaper went so far as to publish the telephone extension number of the section. Chaos followed.

Scores of citizens with a pixie sense of humor called the number just to hear a voice at the far end murmur, "Frustrated Freight section." Officials of the Traffic Division were greatly vexed. Some days later, a member of our staff called to get the latest returns on the situation and was told that an investigation was under way to learn who tipped off the papers. The culprit, it was stated, will be reprimanded—if and when discovered.

"Frustrated Freight" is exactly that. It's Army freight that hasn't been claimed by the proper officials, or hasn't been supplied with a consignee address, and so it just sits around, frustrated, until the authorities decide what to do with it. The term is not uncommon in traffic circles, we are told. The War Department had a "Frustrated Freight" section in the last war, too.

Blood, sweat and tears

AN OUT-OF-TOWN reader dropped in the other day for a chat about things back home. He manages a small factory, or at least he thinks he does. We thought so, too, until he told us this story: It seems his 16-year-old son wanted to get a job in his father's factory during the summer school vacation. Fine! said the father, who promptly boasted to his foreman about the "chip off the old block." The foreman, a cautious fellow, warned the father that, to employ the boy for a few weeks, he would have to do these things:

Apply to the city government for a special permit for the employment of a minor.

Serve formal notice on the War Manpower Commission that a job was about to be filled.

Deduct 20 per cent from wages paid to the boy, for income tax purposes.

Apply, at the end of the boy's employment, to the Internal Revenue Bureau for permission to refund the 20 per cent, since the boy would not be earning enough in the vacation period to make him eligible as an income tax payer.

Report the boy's earnings along with his own, at the end of the current tax year, and pay taxes on them, since the boy is a minor.

Report to the War Manpower Commission at termination of the boy's employment.

Report to the city government at termination of the boy's employment.

P. S. The boy is attending summer camp.

Where there's a will—

A MAN may be down, 'tis said, but he's never out unless he admits it. Same goes for a city. Scranton, Pa., has been down a good many times in the past ten or 15 years. It suffered permanent loss of 50,000 jobs as anthracite in nearby mines was mined out. The depression piled on new woes. Other cities boomed with defense and war work, but the Army said Scranton was too close to the Coast. With 8,000 vacant dwellings, Scranton watched the Government build new housing for war workers elsewhere.

Scranton's leading citizens and its Chamber of Commerce obstinately refused to go down for the count. They plugged away with committees, brochures, broadcasts, advertisements, direct solicitation of industries. They stressed the city's available manpower pool, its surplus of housing, its strategic location, its utilities and other facilities. Chambers of Commerce in crowded war centers began to send overflow work to Scranton. Several "essential civilian needs" industries were induced to come in.

Now, Scranton has just landed its first major war industry, which will employ 7,000 with an estimated pay roll of $10,000,000. Its head bloody but unbowed, the city is redoubling its efforts. It refuses to stay down for the count. That kind of community spirit can't be licked.

Mr. Queeny writes a book

IT'S NEWS when the head of a busy war industry, in his spare moments, produces a good book. Edgar M. Queeny, chairman of the board of Monsanto



There Are No "Graduation Days" For Good Railroad Men

IT may seem strange to a little child just starting in school to see DAD bringing home books, too.

But it's an everyday sight in the homes of Erie men because constant training in better railroading methods is a regular part of the Erie program.

After all, it isn't alone the number of years of service that count. It's the knowledge gained both by experience and study that makes a railroad modern and progressive.

All along the Erie lines you will find regular conferences attended by experienced men as well as youngsters. They are studying better ways of doing their jobs in order to make good service better. Good railroad men cannot be trained in a few weeks. It takes years of training to be ready for the responsibilities of moving and safeguarding human lives and valuable freight.

Wartimes call for alertness, efficiency, and dependability on the part of all railroad men. Erie men are determined that no assignment either in war or peace will find them unprepared.

ERIE

23,578 FREIGHT TRAINS DAILY

1,408,964 FREIGHT CARS DAILY

25,000,000 NET TONS DAILY

AMERICAN RAILROADS AT WAR

THE RAILROAD OF HELPFUL SERVICE

Chemical Company, has done it. His "The Spirit of Enterprise," just out, is a lively, logical and even exciting statement of the case for free enterprise. And it's easy to read, which is more than can be said for many current discussions of political economy.

His first effort to put his thoughts on paper, Mr. Queeny explains in a foreword, resulted in merely a series of standard arguments against the New Deal's new rules for business. He felt the trend toward bureaucratic government controls of competitive enterprise ran much deeper than any political administration, so he threw away what he had written and did the job over again.

Mr. Queeny says some harsh things about business men and business organizations, including the United States Chamber of Commerce. His proposed alternatives for government control of business will stir up some heated debates. But the book as a whole is provocative and stimulating, and offers a wealth of factual source material.

Which way, please?

IT MAY BE the humidity, but we're befuddled. We sat around the other evening with a group of Government's young men who exhorted one and all to be Good Neighbors with all the rest of the world. During war, they emphasized, we must share and share alike with our allies. When peace comes, they added, it is our duty to expand this policy to our one-time foes. Blood brothers, all.

Before the evening was over, the same group was castigating American firms that have been doing just that. The sharing of industrial patents and processes was held up as an appalling evil. Where, they demanded, was the patriotism of firms which would share patents with German and Italian business houses?

As we pedalled home we reflected that American business firms had been following the Good Neighbor policy in the most practical way before many of these young men were born, and when we were avowing our eternal friendship and accord with nations whom we now fight desperately. There was even a time, we recalled, when the country looked askance at American firms which supplied industrial "know-how" to Russia, with which we are now sharing our sacred secrets and worldly goods. The moral seems to be a business man will have to employ an astrologer to tell him in advance which nations, a quarter century hence, will be our friends and which our enemies.

The Government's young men remind us of the horseman who mounted his steed and galloped off simultaneously in all directions. It was hard on the horse.

The boss enlists

WE PAUSE to salute Business Man William Coleman, president of the All-State Wire Products Company at Cleveland, who at 25 has turned the company over to his 16 employees and has joined the Navy as an ensign. His company, which now makes parts for aircraft barrage balloons and life rafts, formerly turned

out display racks, wire baskets and stands. It has a cash balance on hand for working capital, a three-months' backlog of orders, and no debts.

All 16 employees pledged their president that the company's production schedules would be kept up. Mr. Coleman tried four times to get into the Navy before he was accepted. He is the seventh from his company to get into uniform. He has two brothers in the service. And Mrs. Coleman is joining the women's corps of the Marines.

"The people are working so hard at the shop," said Ensign Coleman, "and things are going along so smoothly that I think I can be of more use to the Navy than here at home."

A platform's private plank

A FEW YEARS ago Premier Aberhart set the Canadian province of Alberta afire with his attacks upon the profit system, private banks, insurance companies, utilities and similar private institutions. He held the capitalistic system up to public scorn and distrust, and proposed to substitute a government system of "Social Credit" through which a benign government would hand out a new kind of money "tickets" to all citizens of Alberta. It was a glorified ham and eggs plan. Mr. Aberhart won the election by a landslide.

Well, Premier Aberhart died recently. Probate records show that he left an estate valued at $41,000. Of this amount $35,351 was represented by utility stocks, insurance policies, and deposits in private banks.

His portfolio held only two bonds of the Alberta government. They had a face value of $500 each, but they were valued by probate officials at only $350.

About the cover

OUR COVER PHOTOGRAPH this month is proof positive that the day of the pioneer is far from done, pessimists to the contrary notwithstanding. The wind-burned, salty countenance is that of "Bob" Bartlett—Captain Robert Abram Bartlett—who explored the Arctic with Peary and has been busily charting and probing its icy wastes ever since. Greenland, Alaska, Baffin Land and Ellesmere Land have been mere flag stops for this man, whose explorations have paved the way for the pioneering in which large numbers of Americans are today engaged in the Far North. They are building new bases and developing new routes for planes which fly over the top of the world, bringing within a few hours of Chicago, Detroit and New York distant places which once were weeks and months away by land and sea.

Truth in advertising

A PRIVATE EMPLOYER who undertook, on his own, to advertise for help with the statement "Work 48 hours per week—Paid for 52," would shortly find a swarm of government enforcement agents on his neck. Yet the Government itself has been doing just that in connection with the recruiting of workers for



PURE WATER *guards the health of war workers . . .*

COMMUNITY water works, delivering pure water and maintained at full efficiency, are a vital factor in safeguarding the health of workers on the home front. While water-borne diseases have sharply decreased in America, the corner-stone of our Public Health program is still the extension and improvement of public water supply systems.

* * *

Water works engineers have performed wonders, under wartime handicaps, in delivering good service, even in cities whose populations have mushroomed with war plant workers. But a nation-wide program of water purification and sewage treatment plant construction, and abatement of stream pollution, had to be halted. One authority estimates that $750,000,000 of such projects have been deferred until after the war.

* * *

An informed public will insist that these vital services be constructed or restored to peak efficiency as soon as possible after the war's end.

* * *

We publish this message in the public interest since our peacetime product—cast iron pipe—is used almost wholly in the public service. More than 95 per cent of this country's water mains are cast iron pipe which serves for more than a century.

NO. 1 TAX SAVER

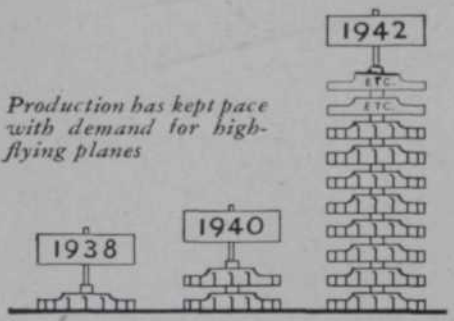


Pipe bearing the above mark is cast iron pipe. Made in sizes from 1¼ to 84 inches.

CAST IRON PIPE
RESEARCH ASSOCIATION, CHICAGO

Pike's Peak to FUJIYAMA

IT takes a block-buster only a few seconds to fall from a high-flying U. S. bomber to its bull's-eye on Berlin or Naples or Tokio. But it took almost 25 years to get the plane up there to drop the bomb. For where



Production has kept pace with demand for high-flying planes

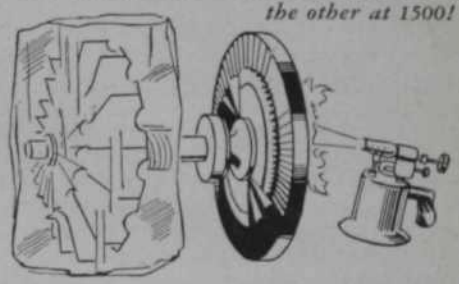
some of our planes are flying today—on top of practically anything that flies—the air is so thin that a plane engine would lose about four-fifths of its rated sea-level horsepower if it weren't equipped with a *turbosupercharger*.

It was back in the days of World War I that the Army Air Corps first asked General Electric engineers to tackle the problem of feeding plane engines air under pressure to cure the loss of power at high altitudes. The result was the turbosupercharger—a device that scoops in 60-below-zero air and crams it down the engine's windpipe to provide the same amount of oxygen it would normally get at sea level. And since the turbosupercharger takes its power from the engine's own red-hot exhaust gases, it almost makes the plane lift itself by its own bootstraps.

The first success came in 1918, on Pike's Peak, where a supercharged Liberty engine, rated at 350 horsepower, actually delivered 356 horsepower at 14,000 feet. That was just the beginning. For 20-odd years G-E engineers worked to improve the device. When the present war broke out, it was ready—a potent, all-American weapon which the Axis, for all its years of war preparation, could not match. Today all of America's big bombers are equipped with turbosuperchargers. And all of these turbosuperchargers are built either by General Electric or in the plants of two other manufacturers from G-E designs.

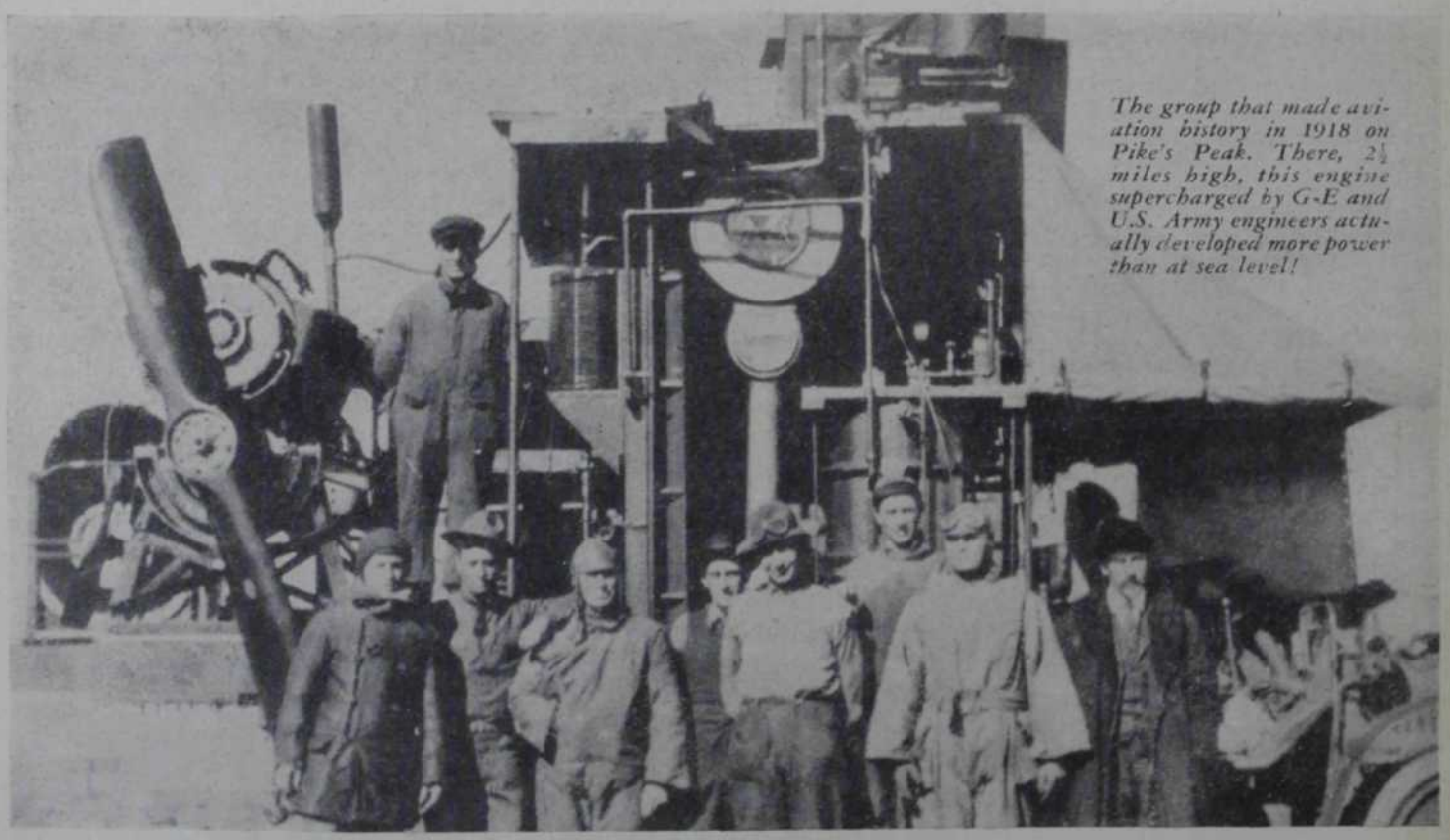
The turbosupercharger is just one of many engineering near-miracles developed in industrial laboratories in time to put on a uniform and begin fighting for America. We have them because of the happy combination of ingenuity and perseverance which has always characterized American industry. It is a combination that will have a lot to do with winning the war, and with building the better world hereafter. For then the men who are

One end operates at minus 67 degrees, the other at 1500!



building fighting machines will be back on the job of providing better peacetime things for all of us. *General Electric Company, Schenectady, N. Y.*

Hear the General Electric radio programs: The "Hour of Charm" Sunday 10 p.m. EWT, NBC — "The World Today" news, weekdays 6:45 p.m. EWT, CBS.



The group that made aviation history in 1918 on Pike's Peak. There, 2½ miles high, this engine supercharged by G-E and U.S. Army engineers actually developed more power than at sea level!

THE BEST INVESTMENT IN THE WORLD IS IN THIS COUNTRY'S FUTURE—BUY WAR BONDS

GENERAL ELECTRIC

962-49001-211

Panama City, Fla. Statements to this effect appeared in advertisements in Atlanta papers, over the signature of the United States Employment Service.

Replying to protests by private business firms whose employees were melting away, the local War Manpower Commission chief wrote:

I am sure you realize that, as a matter of technique, if the whole truth were completely set forth in the ad, the chances are that the shipyards at Panama City could not be manned and vital ships necessary for the war effort could not be built. It is therefore necessary in order to attract prospective workers to have some "lead" statement that will attract the eye in the advertising.

We understand that following the protests, Washington ordered such misleading "lead" statements dropped from future advertising controlled by the USES.

The shoe won't fit

THE ARGUMENT is advanced that food subsidies should work here because the British have had success with them. A member of Parliament, on a recent visit to the United States, expressed astonishment at this reasoning.

England, he pointed out, cannot produce what she eats. Her food must be imported. War has imposed wholly artificial obstacles to normal imports, such as ship sinkings, high insurance costs, spoilage and the like. England's subsidies are designed to absorb this cost, not to increase food production.

"But here," said the M. P., "you propose to bribe your own people to produce food for you. It would never occur to the British to do such a thing."

A warehousing problem

A NEW KIND of shortage in warehouse space looms ahead. The Army and Navy long since requisitioned practically all available storage space for war materials, but John Q. Public is having some trouble finding a place to store his War Bonds. Safety deposit boxes are going like hot cakes; some banks are already sold out on small boxes, rentals are up 31 per cent over last January.

Before the war, according to an estimate by the Northwestern National Life Insurance Company, only half of some 11,000,000 safety boxes in the United States were in use. Today the occupancy figure stands around 80 per cent and it's going up rapidly.

Calendar reform—15 B. C.

THE HISTORIAN Ferrero tells about an interesting expedient adopted by Augustus Caesar's tax-gatherer to keep the money rolling in. The tax-gatherer was a liberated slave named Licinius. He was full of big and original ideas. He made the Gauls pay taxes every month, and when the exchequer ran low, he increased the number of months from 12 to 14. He called the last two Undecember and Duodecember. Let's keep this just between us—not a word of it to Randolph Paul or Henry Morgenthau.



"194-?" is the year the war will end.

It could still be a long way off. The gains we have made—the victories we've won—may truly be only "the end of the beginning."

But if the day of unconditional surrender could be known, it would be ringed on every business calendar. For *that* day may drastically change the direction of many industries.

The problems you will face then may be far different than those of today. You may want to introduce new lines, redesign products, acquire new equipment. You may want to increase your holdings—or dispose of them. But then, as now, financing must be the mainspring of all successful action, whether in production, distribution, reorganization or expansion.

We have organized a new Commercial Financing division which offers you a sound, well-rounded service—a service that will provide all the working funds you need for today's operations on a basis that will make every dollar productive of profit for you.

That service can be of incalculable help to you also in your planning for the post-war conversion period.

We will gladly supply detailed information on request.

Commercial Credit Company
Baltimore

Subsidiaries: New York Chicago San Francisco Los Angeles Portland, Ore.

CAPITAL AND SURPLUS MORE THAN $65,000,000

Interesting color charts of ARMY, NAVY and MARINE insignia free on request.

A 100% RECORD

Awards on May 8th, 1943 to two plants in Kenosha, Wisc., completed this 100% record for The American Brass Company.



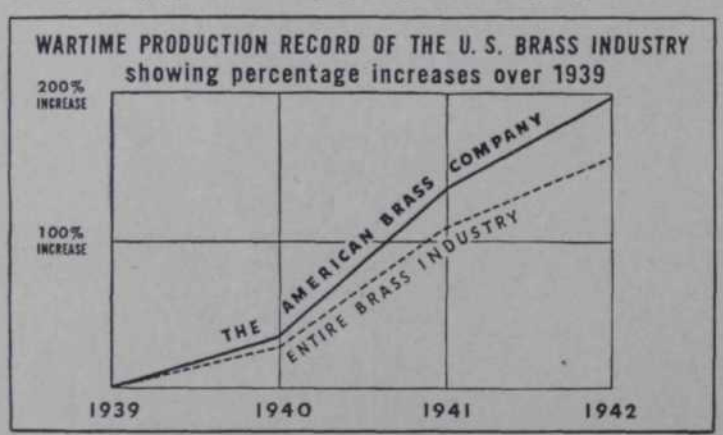
ALL TEN AMERICAN BRASS CO. PLANTS IN U. S. A. HAVE EARNED RIGHT TO FLY ARMY-NAVY "E" FLAGS

This is the story in terms of war production

Our Connecticut plants were among the first in the brass industry to receive the coveted "E" Award for outstanding production of war materials. Since then *all* our plants, including those in the States of Michigan, Wisconsin and New York, have been similarly honored.

As the largest fabricator in the copper and brass field, The American Brass Company is keenly aware of its responsibility and its opportunity to serve the cause of the United Nations.

Since 1939, production has been tripled, with virtually every pound today going for war purposes.



This chart*, based on 1939 peacetime production, shows the rapid swing into all-out war production, both by the copper and brass fabricating industry and The American Brass Company (not including Government-owned plants). All-time production records have been continually broken ever since the National Defense Program was initiated in 1940.

*Based on compilations of The American Bureau of Metal Statistics

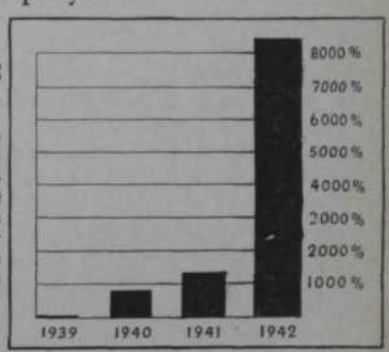
This record was accomplished by close cooperation between management and labor . . . careful planning for rapid conversion to wartime operations . . . intensive training of new personnel . . . plus efficient utilization of existing and new plant equipment.

Detailed figures, of course, cannot be revealed, but The American Brass Company is consistently breaking all previous volume records. In addition to its U. S. plants and that of a Canadian subsidiary, Anaconda American Brass Ltd., the company's production also embraces three plants operated for the United States and Canadian Governments.

Shipments this past January were the largest in the company's history. March exceeded January. The first quarter of '43 was by far the greatest tonnage quarter in the records of the company.

PRODUCTION OF COPPER ALLOYS FOR AMMUNITION by The American Brass Co.

This chart shows the vast increase in production of copper-base alloys directly earmarked for ammunition in plants operated by The American Brass Company. This is one of the most vital needs for copper and brass. Tremendous quantities are required for all types of ammunition.



The American Brass Company is proud indeed that all the plants it operates in the U. S. A. have won the honor of flying the Army-Navy "E" for excellence in production. But it is even prouder of the organization and the will-to-produce that have made this record possible . . . *and will keep it going.*

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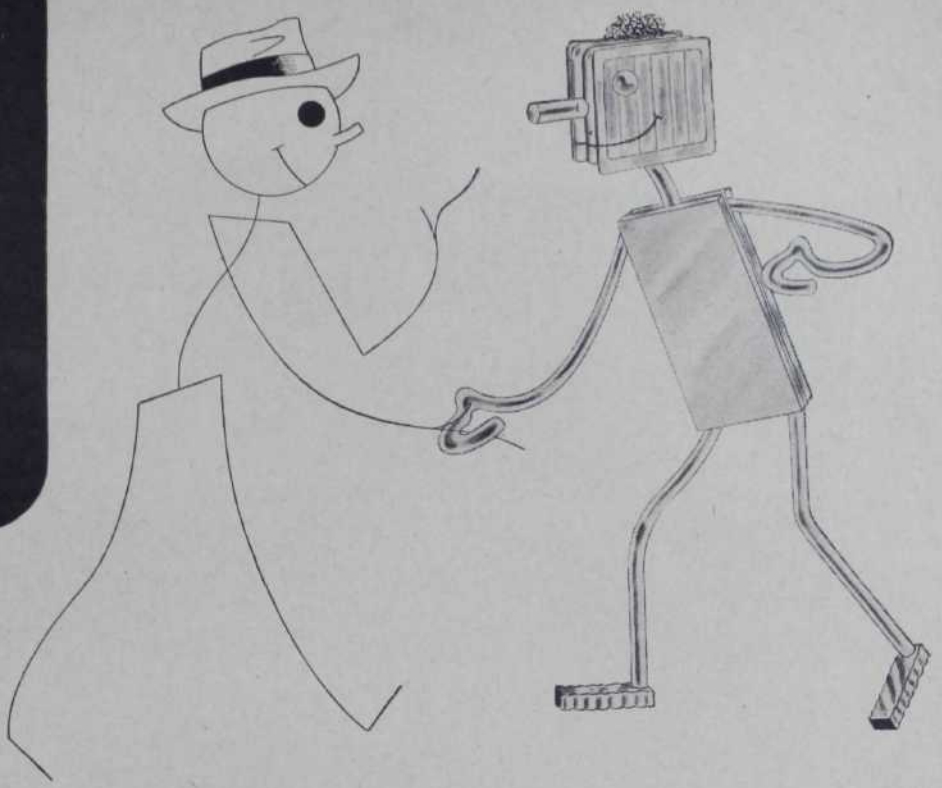
THE AMERICAN BRASS COMPANY

ANACONDA

Subsidiary of *Anaconda Copper Mining Company*

BUY ALL THE BONDS YOU CAN AFFORD . . . TURN IN ALL THE SCRAP YOU CAN FIND

WE HAVE THIS TO SAY ABOUT GLASS



Glass gives the lie to the adage about the old dog.

Glass is sponge or thread, wool, brick or sheet. Glass can be flexible, nearly unbreakable, opaque or transparent. What has long been the mirror of another's beauty is now a thing of beauty in itself—dazzling in a rainbow of colors.

Glass is being virtually reborn!

It is such fresh and adaptable ability that will father our better world. Newness—new things to make, new things to make them from—this is a hope of the postwar economy. The more that glass can contribute to this better, busier world, the more glass does for all other materials.

We know that glass has teamed with aluminum, for example, in many new ways, to imagineer some delightful surprises for postwar living. Glass weighs about the same as aluminum. They build well together. And they look well together, because aluminum, too, is facing the future in lustrous reds, blues and gold.

There's a lot to be done now. Imagineers must go to work. Imagination must be loosed to the stratosphere and then brought down again with workable plans for using all these new materials, and new applications of old materials, as soon as men and the things men hope for change back to mufti. The first item which industry will be expected to produce will be fifty-five million jobs in mufti.

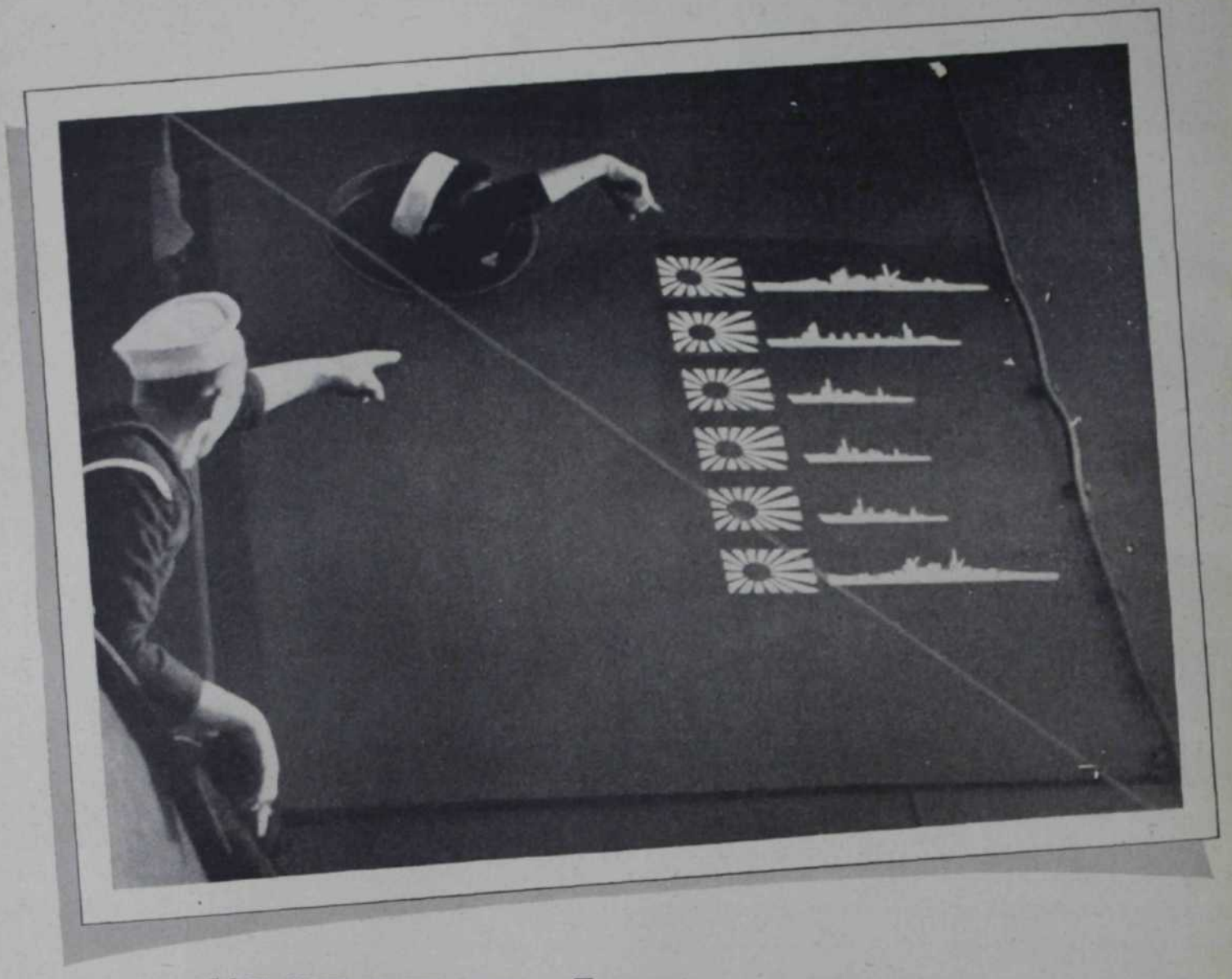
It won't be done haphazardly. Imagineers will have to put their heads together.

It can be done. We're sure of that. We've been answering questions from other Imagineers about the stronger, cheaper and more versatile Alloys of Alcoa Aluminum, and we've seen that definite, detailed progress *is* being made on postwar plans.

ALUMINUM COMPANY OF AMERICA, 2125 Gulf Building, Pittsburgh, Pennsylvania.

IMAGINEERING AT WORK

Alcoa Aluminum



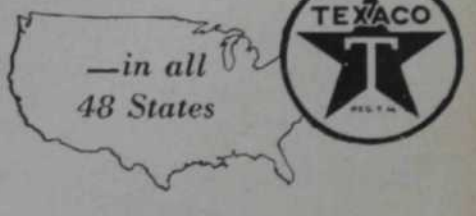
"SCRATCH 6 NIP SHIPS!"

Six menacing Jap ships *sunk in 27 minutes!* Six more notches in our Navy's belt of steel. A battle score pointed to with pride by members of the heroic crew.

There was a time when this fighting ship of our great Navy was a million or so separate pieces and parts. Thousands of workmen in hundreds of scattered plants produced the steel, the myriad parts to be assembled in hundreds of other plants and on the ways.

No matter where these plants are located one of Texaco's more than 2300 wholesale supply points is nearby. A Texaco Lubrication Engineer will be glad to cooperate in selecting the most suitable Texaco lubricants to increase the output of your plants.

THE TEXAS COMPANY





How Rayon helps keep it hot for Hitler!

YELL CHETNIK at a Nazi soldier and you strike terror into his heart! For over a year now, General Mikhailovitch's guerilla armies have wreaked havoc on the Nazis in Yugoslavia.

Keeping them in the fight has been another war job for rayon! For like any other army, Mikhailovitch's men must be assured of adequate supplies. That's where rayon supply parachutes are turning in a good account of themselves.

Every day they drop guns, ammunition, radio sets, medical equipment, food and other vital supplies to the Yugoslavian patriots in the field.

Here is a fighting job that the average citizen would hardly dream possible of rayon. And with good reason. For the rayon yarn used in these supply parachutes is far different from that used in ordinary fabrics. It was specially engineered for its purposes in the laboratories of American Viscose Corporation. It must be strong and tough to withstand the sudden shock of the load as the 'chute snaps open.

Adapting rayon to meet special requirements is one basic objective of American Viscose's program of continuous research. As a result of these studies, there emerge constant new uses for this miracle of man-made fibers. Uses that serve America equally well . . . in war or peace.

"CROWN" TESTED RAYON FABRIC

AMERICAN VISCOSE CORPORATION

Producers of CROWN* *Rayon Yarns and Staple Fibers*

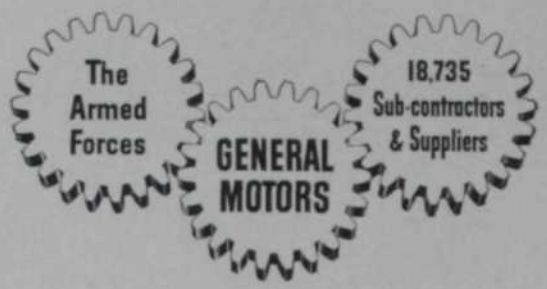
Sales Offices: New York, N. Y.; Charlotte, N. C.; Providence, R. I.; Philadelphia, Pa.

★ BUY UNITED STATES WAR BONDS AND STAMPS ★

*Reg. U. S. Pat. Off.

Copyright, 1943—American Viscose Corp.

WORKING TOGETHER



IT HAS BEEN our privilege to play an important part in war production—geared with the supply services of the Army and Navy, and with almost 19,000 other producers who have worked with us.

Figures show how successful this "partnership" has been. But they do not show the valuable direction and cooperation we have had from Army and Navy officials. Nor do they indicate the fine spirit of "teamwork" shown by our suppliers and sub-contractors.

While 18,735 organizations have shared our big job of war production, there have actually been more than 68,000 such "partnerships" established. For, in many cases, several divisions of General Motors have gone to the same source, though for different types of work.

It is interesting to note that nearly three-fourths of the firms which have furnished us parts for war products, employ less than 500 people. Of these more than half employ 100 or less.

We have chosen our sub-contractors and suppliers carefully, in order to secure those best qualified for the work at hand.

In this we have had one great advantage: "Sub-contracting" is merely a wartime extension of a time-honored General Motors method. We have always dealt with thousands of suppliers of materials and parts.

And so we have known how to proceed in establishing sources dependable as to both quality and efficiency of performance—not only among organizations with which we have formerly worked, but also with the thousands of others which it has been necessary to add.

This sub-contracting "know-how"—combined with manufacturing "know-how"—is largely responsible for the consistent quality of the war goods produced. It also accounts for cost reductions totaling hundreds of millions of dollars, turned back to the Government.

The "partnership" of the Armed Forces, General Motors and the thousands of other businesses involved—some large, some small—is but one example of cooperative wartime endeavor by the automobile industry.

All companies in this mass-production industry have been cooperating with one another—and with organizations not formerly supplying the automotive industry—in order to utilize all knowledge and facilities suited to the task.

The success of this method demonstrates one fact of tremendous importance to all Americans:

American enterprise and its time-tested production methods are meeting and fulfilling the most imposing demands ever placed upon the industry of any country.

FACTS ON GENERAL MOTORS SUB-CONTRACTING

Total number of sub-contractor-supplier connections with GM divisions	68,505
Number of separate organizations from which GM purchased parts, materials, services and supplies	18,735

★ ★ ★

Size of organizations furnishing us with parts for war production—as indicated by special survey—was as follows:

Firms employing less than 100 people	43%
Firms employing 100 to 500 people	31%
Firms employing more than 500 people	26%

★ ★ ★

General Motors' policy on sub-contractors and suppliers has resulted in the spread of approximately one-half its war work to outside firms.

The figures above are taken from an exhaustive study of sub-contracting prepared in connection with a recent report to the War Department.

GENERAL MOTORS *"Victory is Our Business!"*

PLANES ★ PLANE ENGINES ★ TANKS ★ DIESEL ENGINES ★ TRUCKS ★ GUNS ★ AMMUNITION

AND MORE THAN 2,000 OTHER ITEMS OF ARMS AND EQUIPMENT FOR OUR ARMY AND NAVY

MANAGEMENT'S *Washington* LETTER

A last minute roundup by a staff of Washington observers of government and business

THE WHOLE QUESTION OF AMERICA'S MOST effective part in the global war is being restudied by U. S. and United Nations strategists.

Tendency is toward accenting production more heavily, making this country more than ever the arsenal of democracy.

Size of U. S. armed forces depends on the strategists' final decisions.

Insiders say it is very likely the quota will be cut considerably below the 10,900,000 figure set earlier, to save manpower for production.

This revision would make it unnecessary to draft fathers—this year or at any other time.

It also would bring a rising pressure for a national service act to allocate and control industrial manpower.

> Growing needs for equipment, recent recalculations of fighting manpower available to the Allies are cited to support the "arsenal" idea.

Those in close contact with high military authority say privately the Allies picked up far greater Free French fighting strength than was expected in North Africa.

Real purpose of General Giraud's Washington visit was to arrange for equipping and supplying these large forces, the same sources say.

Military men are revising upward their estimates of manpower to be released to fight with the Allies—from Turkey, the Balkans, France.

These fighters will have to be armed, equipped, supplied.

Also, pressure grows stronger for U. S. to equip and supply China's fighting millions.

Great Britain is said to be relying heavily on this country to equip and supply a huge army being organized in India.

Thus the thought that this country, equipped to produce, safe from attack, should spend more of its energy on producing, less on fighting.

Such a plan would mean much more work for this country's mines and factories, far greater demands on available materials, tightening of civilian supply.

Present indication: This will be the program.

▶You'll see little direct effect of the Smith-Connally anti-strike law.

White House didn't want it, has great leeway in interpreting violations, will do little if anything about it.

But effect on union leaders is great.

They were shocked by its passage over their own and the President's veto, by the demonstration of their loss of power in Congress.

> A split in the heretofore unified CIO and AFL national legislative forces helped its passage.

This split reflected the bitter fighting between the two big unions for representation in war plants.

This fighting for membership reached Capitol Hill when John P. Frey of the AFL Metal Trades asked Congress for protection against raiding by CIO organizers in the Kaiser shipyards.

Don't expect the Smith-Connally Act to curtail strikes. These will continue as "unauthorized stoppages"—the term applied since unions pledged no strikes.

Remember, the law attempts to deal only with strike leaders, does not try to punish strikers.

▶Biggest postwar rehabilitation job in war-torn countries will be along transport equipment, other industrial lines.

Suppliers in these lines can look forward to long term demands.

One view within the Government discounts estimates indicating tremendous relief needs.

> They aren't advertising it, but this group has made studies indicating that war-area countries' ability to take care of themselves will return quickly when war ends.

Terrific bombardment of modern warfare ruins cities, breaks up distribution systems, but damages agriculture only slightly.

And agriculture, these persons point out, is the main endeavor in most of the war area.

Starvation occurs now because Axis drains off products and manpower.

But when these flows are stopped or reversed, ability to feed themselves soon will return to victim countries.

▶Businessmen who thought they saw relief from time-and-energy-consuming anti-trust suits when Thurman Arnold was elevated to the federal bench better take another look.

> Tom Clark, Arnold's successor, is carrying on the anti-trust drive with greater vigor than ever.

He has increased the size of his staff by 30 per cent, is looking for still more investigators.

▶Here's an item for your own postwar planning department:

Government statisticians estimate this year's U. S. savings at about $40,000,000,000.

Last year's record-breaking high was slightly more than $25,000,000,000.

Pre-war total never reached $10,000,000,000, usually was far below that.

Current rate indicates the tremendous postwar buying power being built up, plus the favorable credit position buyers will be in.

▶White House plans to commit U. S. resources to world-wide rehabilitation and relief without Senate sanction will meet stiff resistance on Capitol Hill.

Executive attempt to bypass the legislative branch in postwar world distribution of American supplies, materials, equipment, was disclosed by Secretary of State Cordell Hull.

Hull was questioned by Senator Arthur Vandenberg of Michigan after he had read the United Nations Relief and Rehabilitation Administration agreement proposal.

> That document would commit all available U. S. resources to the disposal of an international administrative agency, Vandenberg declared.

The only authority it would leave to Congress, he added, would be that of appropriating the cost assessed against the U. S. by the international body, a cost already morally obligated.

Hull told Vandenberg that it had been decided after consultation with leaders of both parties in both Houses of Congress that U. S. participation in the establishment of the international administration should be through executive agreement.

Battle lines are forming to combat the Administration plan of substituting "agreements" for treaties that require Senate approval.

▶Truckers' troubles:

Although more than half their work is directly connected with war, shortages of manpower and equipment are reaching the serious stage.

They need drivers, helpers, mechanics, parts and replacement equipment.

Increasing the speed limit to 45 miles an hour would equal a 23 per cent rise in hauling capacity, but they must stick to 35.

Tonnage hauled this year is running about 30 per cent greater than in 1942.

Unless shortages are relieved, service will be seriously impaired within the next 60 days, several big operators say.

▶Congress will raise the renegotiation limit from $100,000 to $500,000.

That's a fairly good bet. Results are less certain of a campaign still under way to get further refinement of the renegotiation processes.

Johns-Manville President Brown told the House naval affairs committee that, of 85,000 war contracts subject to renegotiation during the law's first year of effect, only 9,621 had been assigned for examination up to last April 1.

> Final agreement had been reached with only 203 of the 85,000, or ¼ of 1 per cent, and examination had been actually started on only 3,176, or 4 per cent of the total.

Argument against renegotiation is that it makes war contractors uncertain about their finances, that excess profits should be covered in the tax law.

▶Coal wage, cost and price practices are as complicated as railroad rate structures.

There lies the difficulty with portal-to-portal pay.

Some miners are paid by the ton, others by the day. Practices vary in regions, in single districts, even in single mines.

Mechanical loading generally is on a wage basis, hand loading by the ton.

Some miners reach their work within 10 minutes after they enter the mine. It takes others an hour and 10 minutes.

Literally hundreds of thousands of coal prices would have to be revised to absorb the added cost.

Portal-to-portal pay is possible. It works in England. But the changeover would take time, patience, cooperation.

Those who know the problem say it

could be worked out, but not under strike conditions, nor during war.

▶Management should get ready now for important debates over war profits.

War contractors' profits are being placed under the microscope in several government quarters.

If customary technique is followed, a few extreme cases will be presented to the public as typical.

Living cost will play a big part in the approaching presidential campaign. Search is on for factors to blame.

War profits are a natural—because selected cases, percentage figures, can be made to prove almost anything.

Some in government think industry has received too much favorable attention for production records, would offset it with war profit talk.

Controversy probably will reach peak when Congress tackles taxes, inflation.

▶You'll hear more this fall about personal excess profits taxes.

House ways and means committee members already have asked Treasury for data on which they may compute the possibilities of such a levy.

Idea is to go after the war dollars in wage earner's pockets, just as corporation taxes rake off the war-profit dollars in industrial tills.

> It would hit hardest in war plant pay roll brackets, which have nearly doubled in the past three years.

Under the plan as tentatively outlined the present 20 per cent withholding tax would remain in effect.

In addition, individuals would pay "excess profits" taxes on that part of 1944 income which exceeded their income in a "normal" year, or average over a period of years.

Labor is building up opposition with the battlecry: War has not brought the working man excess profits, only "living wages."

There's some Treasury support for the proposal, on grounds it would check inflation, produce revenue which cannot be found in higher corporation taxes.

▶Congressmen home on "vacation" are getting an earful from their constituents.

First reports from the grass roots are that indignant, protesting citizens are seeking out their legislators in greater numbers than at any time since the depression's low point.

Significant, too, are reports that most of these are so-called middle class citizens who ordinarily ignore politics and Washington. They constitute what once was known as "the silent vote." But that's a misnomer now.

Practically all protests are against Washington's handling of homefront problems, congressmen report.

Even former senators, representatives, are deluged.

One of these, defeated last year by his midwest industrial district, closed his law office, shut off his phone to ward off former constituents who thought he still represented them.

> Small businessmen, owners of "papa and mama" stores, farmers, housewives are most vocal.

All this will be reflected on Capitol Hill when Congress reassembles next month.

▶This war is far from won.

Top-rank Army, Navy officers emphasize this, privately express serious concern over homefront attitude.

They detect, they say, a feeling that the big job is done...a tendency to spend too much time looking beyond war.

Workers are too impressed by battle victories, tend to let down when news is good.

This tendency, this feeling, hurts production, they contend.

TOO LATE TO CLASSIFY: Government instructs housewives on how to select 18 grades of eggs—dealers know of only nine....Present train travel rationing rumors are scare talk....OPA Brown's oil adviser, Sumner Pike, lost his shirt several times in oil operations but always found it again....Washington clubs are limiting the number of guests members may bring to lunch....Leather tanning operations are running 30 per cent under 1942's same period rate—by order of WPB....Mountain states ranchers are using airplanes to sow grass seed on slopes, expand cattle feeding area....Treasury was pleased with over-all ease with which withholding tax went into effect....Farmers next month will harvest their biggest hemp crop since pre-Civil War days....During his recent tour of U. S., Sir William Beveridge compared his popularity, here and at home, with that of movie actors....Switzerland sends watches to this country, precision instruments to Germany, Italy....Donald Nelson says United Nations' 1944 production will be four times that of Axis....

A NEW DESIGN FOR LIVING

BOHN engineers, engaged entirely on war work, foresee great changes in post-war homes of the future. Wider use of light alloys will make possible greater beauty, simplified architecture, and lowered costs. Girders, pillars, and innumerable beautifying effects made of light alloys produced by Bohn, will mean new designs for more attractive living. Remember the name Bohn—headquarters for light alloys and their many advanced applications.



BUY WAR BONDS

BOHN

BOHN ALUMINUM AND BRASS CORPORATION, DETROIT, MICHIGAN

GENERAL OFFICES—LAFAYETTE BUILDING

Designers and Fabricators—ALUMINUM • MAGNESIUM • BRASS • AIRCRAFT-TYPE BEARINGS

Nation's Business
AUGUST 1943

The Jewel in the Toad's Ugly Head

SWEET are the uses of adversity, and from this grim-visaged World War II will come material, as well as spiritual, benefits to us and mankind.

The crucial problem of war is movement in all its forms. Getting there "fustest" is no idle aphorism. Speed governs every effort on both battle and home fronts. It is a contest against Time. In factory, it is to make two guns shoot where one shot before; in drafting room, to make a tank or plane move faster and farther; in air and on sea and land, the contest is to move men and death-dealing devices to the front and at the front more rapidly than the enemy.

In peace, as in war. Everything in life, said a great philosopher, from marriage to manslaughter, turns on the speed and cost at which men, things and thoughts can be shifted from one place to another. Nor does it take a war to show us that the world is more and more determined to beat Father Time.

Tap any man on the shoulder. Get at his innermost desires, and you'll find that he is trying to get something done quickly so he can move on to something that he would rather be doing.

This urge to beat Time accounts for the ready reception of the automobile, the radio, aviation, the streamliner; of running water in the home, and the vacuum cleaner, the toaster, washing machine and electric refrigerator, the roller screen and automatic stoker; of the appliances in the office, from adding machines to automatic pencil sharpeners; and scores of other evidences of the inexorable Fight Against Time.

In the wake of war's terrible destruction is left a residue of progress, brought about by the life-and-death necessity of more and more rapid movement of thoughts, men and materials. Truly amazing developments in every field of human activity are already here, others rushing headlong. Many of these are still military secrets. Revolutionary changes from war's drafting boards and research laboratories will be applied to the pursuits of peace.

We may look for a new world in the transport of men and things in the air, on and under the sea, and over the ground. The movement of thoughts and ideas has clipped off minutes and hours; radar and electronics, and wartime use of television, for example. Fantastic, likewise, is the Time-whipping by chemistry—aluminum, light steels, magnesium; unbreakable glass, unburnable wood, shoes without leather, window screens without wire, dehydrated food, pre-fabricated shelter, clothing from casein. And already we are permitted to hear something of the astonishing contributions of war medicine to the conquest of Time.

This surge forward in life's comforts and conveniences will not be on tap the day after armistice. It will call for effort, for the sustained pressure of restless promoters and managers. To capitalize fully on war's inventions and discoveries for peace, men will be needed. Help Wanted! will be the order of the hour—men with the will to apply, the energy to organize, and the eagerness to risk their dollars.

America, postwar, will present a business arena in which the finest of human capacities will be sifted out and set to constructive and reconstructive tasks. And American business will respond, measuring up to Wickham Steed's estimate of it a decade ago, with a spirit not of "getting ahead," but of "going ahead."

Merle Thorpe



He comes downstairs with cushions on his feet

ANOTHER REASON FOR GOODYEAR LEADERSHIP

IN THIS toughest of all wars, don't forget the tough assignment handed the U. S. Army paratrooper—the boy who "hits the silk" and drops from the skies, ready for instant action.

To help soak up the shock of his landing (he can't pick any soft spots!), every American paratrooper today wears thick, soft, especially designed rubber heels on his boots.

An exclusive development of Goodyear, this new heel is wedge-shaped at the instep . . . provides maximum cushioning effect . . . stands up under roughest wear and tear of war. And this heel helps prevent the paratrooper from catching his boot on any small obstacle he might encounter if dragged along the ground after landing.

As the leading producer of rubber heels in peacetime, Goodyear now is concentrating much of its research and production on war . . . to help give the fighting men of America the finest fighting equipment ever known.

A pioneer in the manufacture of tires and other rubber products, Goodyear also uses specialized skills gained in working with metals, fabrics, chemicals . . . to serve a fighting America today, a peaceful America tomorrow.

GOODYEAR

THE GREATEST NAME IN RUBBER

Britain Debates Again

THE MAN vs. THE STATE

By SIR ERNEST BENN

★ ★ ★

Once again, opposing ideologies gird for conflict in England, historic battleground of Anglo-Saxon freedoms. On one side are those who propose a new social and economic plan which would mould the individual into subordination to a supreme State. On the other side are men who believe human advancement is never politically planned, but springs instead from individuals who are competent and well-disposed to exercise freedoms wrung from autocracy during centuries of struggle.

Americans have heard much about the activities of the British planners, and might well conclude the advocates of individual freedoms were quiescent. Our listening post in London, however, reports significant and effective educational work by the Society of Individualists, headed by Sir Ernest Benn, and we asked Sir Ernest to tell about the Society and its creed.

Sir Ernest is already known to our readers as the author of "Confessions of a Capitalist" and other articles. He is an outstanding British business man, and a former member of Parliament.—THE EDITORS

★ ★ ★

FOR the single purpose of fighting aggression and winning the war, the people of Britain have willingly surrendered hard-won freedoms gained after centuries of struggle with autocracy. It is now evident that, although these freedoms have been voluntarily relinquished for so long as may be necessary to win the war, they may not be voluntarily returned at the end of war.

The official British propaganda machine, itself a wartime necessity but a peacetime abortion, is spending large sums of money, voted for war purposes, to popularize the anti-democratic idea that the surrender of freedom should be made permanent.

Of a piece with this is the recent statement by Sir William Beveridge that he hopes "to retain *something* of the present Parliamentary system" in his program for Britain's future economy.

Numerous other forces are at work to speed the trend toward totalitarianism, some of them working from Whitehall itself.

Beyond doubt, there is need for a standard around which may rally all who cherish the democratic ideal, and who wish to express their opposition to the trend toward totalitarianism. That is why the Society of Individualists has come into being in Britain. Its function is to assist and encourage all who regard the Totalitarian State as the lowest form of human degradation, and are determined that no such fate shall fall upon Britain.

The Society of Individualists is not a political party with a leader whom all must follow, or a program to which all must adhere. Its members are drawn from a variety of schools of thought and all are free to express the faith that is in them, provided only that they accept the modest and moderate terms of our Manifesto on British Liberty. We have no Parliamentary aspirations. I am not aware of any plans for running Parliamentary candidates.

Our aim is to arouse the latent manhood of the nation to a full sense of the danger of slave-creating tendencies to be discerned in more or less degree in all political parties.

Two opposing views

THERE are two approaches to the problem which has engaged the mind of men for many centuries—the problem of the perfect form of government.

Autocrats, dictators and bureaucrats start upon the basis that the individual man is a knave or a fool, that he does not know what is good for him and that governments must take him in hand. The other, better democratic way assumes the individual man to be good, or at least to have more good than bad in him, and that such bad as there is will be kept in check by the natural competition of the good.

It is high time we divided ourselves and marked out much more clearly the line between these two wholly different schools of thought. There is a big, powerful and ill-defined class which is attracted by the temporary convenience of making special arrangements for knaves and fools. This class forgets that those arrangements, made in the name of the State, must be applied to all and must, therefore, result in multiplying the numbers of both knaves and fools, and weakening the whole of the social

The Creed of the Individual:

1. **When I am on my own,** an individual responsible for myself, I must earn a character, a personal character. That is perhaps my first necessity. Other people must be made by experience of me to learn of my qualities, capabilities and perhaps defects and limitations. In a planned society I have no need of a character. No national or universal plan can afford to take the least notice of personal character.

2. **When I am on my own,** an individual responsible for myself, I must acquire credit, others must be made to know that I am credit worthy, that I can be trusted, that what I undertake I will perform to the limits of my ability. But when I am planned, nothing so troublesome is in the least necessary. I am told that nothing that I, as an individual, do or fail to do affects the public credit. At the same time I, as an individual, am told to be unconcerned as to my personal responsibility for the public debt.

3. **When I am on my own,** an individual responsible for myself, I must avoid loss, but if I am planned and loss comes out of the bottomless, mythical public purse, I am relieved of the necessity and can waste and lose just as much as my inherent laziness may dictate.

4. **When I am on my own,** an individual responsible for myself, I must be useful to others, for in no other way can I exist; my usefulness will be tested by the willingness of others to make use of me, and similarly others must be useful to me. If I am planned I have no need whatever to consider others; they are merely the State, the authorities, the all-pervading *they:* I do not know them, I cannot make contact with them, they mean exactly nothing to me except chits, permits, doles, passes or rations.

5. **When I am on my own,** an individual responsible for myself, I must strive to do better, better than my previous performance and better than others. I must, in fact, apply to the practical things of life the rules which I have learned on the playground at school. I must strive—to use a common phrase—to better myself, to take a step up, and am encouraged in that endeavor by the knowledge that, in stepping up, I cannot avoid bringing others up with me. If I live in a planned society and the urge to move upward has not altogether disappeared, then the only move available to me is into the ranks of the planners where I must proceed to arrange the affairs of others and force them down deeper into the passivity of a planned existence.

fabric. Millions of our people now look for sustenance to a State which already owes them many thousands of millions and can give them nothing but what it can extract from the dependent people themselves. It is a position of grave danger.

Socialism, insofar as it is a process of taking from the rich and giving to the poor, is finished—for the sufficient reason that there are no more rich. Communism, which holds that the State itself has economic productive possibilities, is well on the way, and as all experience has shown, must lead to totalitarianism.

Motor car used as bait

SOME people think of totalitarianism only as a matter of Gestapos, rubber truncheons and the persecution of the Jews. They forget that it started with a long catalogue of social reforms. They forget, also, the people's motor car, which was to be manufactured by the State and made available to every purse. This was the bait used to attract all power to the Central German Government, differing only in detail from the bait now offered to our own unsuspecting people.

All power in the hands of a British bureaucracy is no doubt, for a time, to be preferred by our people to such a power wielded by German officials. But, as our Manifesto proclaims, "Power corrupts, and absolute power corrupts absolutely."

The virtue of true democracy is not that it relieves individual man of responsibility but that, unlike any other system of government, it puts an ever heavier load of responsibility upon him. The opposite view, now dangerously popular, is steadily undermining the democratic ideal and steadily sapping the stamina of our splendid people.

Representative democracy makes men; autocracy makes slaves. True democracy is an inspiration, other forms of government are mere systems.

The road from democracy through bureaucracy to totalitarianism is a broad, easy speedway—and, it must be confessed with shame, a road which has attractions for many well-intentioned but wholly misguided people.

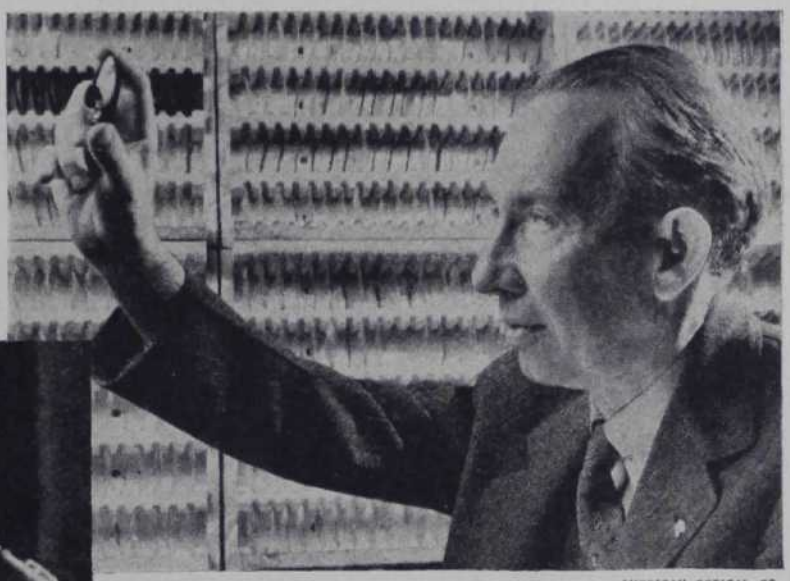
The Individualist recognizes that the State, in addition to engendering the spirit of dependence, inculcates the spirit of uniformity. The State overlooks the elementary circumstance that you can have uniformity only on a low grade and that standardization can be applied only to the

(Continued on page 60)

What Are You Good For?

By EDWIN MULLER

ABILITIES which make a good salesman may mean failure for the doctor. Moreover, too many talents are almost as big a handicap as too few



AMERICAN OPTICAL CO.

Only one person in 2,000 has the combination of aptitudes needed for high-precision lens grinding



NORMAN TAYLOR

For some unexplained reason, men with pitch discrimination make fine aerial photographers



HAYS MCFARLAND & CO.

Women average high in finger dexterity, an aptitude which may cause discontent if it is not used

JOHNSON O'CONNOR has always been impressed by the enormous waste of human material. In every community the majority of men and women are either using their pattern of talents in the wrong jobs or are leaving one or more of their aptitudes unused. They are poorer—in pocketbook and in soul—than they need to be.

It occurred to O'Connor, who began his career as an engineer, that, if you can take a lump of ore to a laboratory to be assayed, you should be able to take yourself to another kind of laboratory to be tested and appraised. He decided to create such a laboratory.

First he went to work testing the aptitudes of the employees of General Electric, where he was employed. Soon he found the means to start his own organization. He called it the Human Engineering Laboratory. It was endowed and became associated with Stevens Institute, an established technical school in Hoboken, N. J.

That was 20 years ago. Since then more than 70,000 persons, of all ages and conditions, have been appraised under O'Connor's direction. The Hoboken Laboratory was moved to New York recently when the Navy moved into Stevens, and there are associate laboratories in Boston, Chicago and Philadelphia. A staff of 50 now tests 10,000 persons a year, and soon Mr. O'Connor hopes to be able to serve 15,000.

Frequently crews visit schools or business houses to make tests. Sometimes neighborhood interest will make it worth while to send out equipment and testers. O'Connor will go anywhere for the usual fee of $10 per test plus expenses. One woman has sent four children from California, one at a time, to be tested. She would have saved money by having a tester sent out to her.

The New York Laboratory is housed in an old brownstone building at 11 East 62nd Street. It doesn't look

like a laboratory. There's only a table and two chairs. You sit facing a brisk and competent young woman who has a stop-watch. On one end of the table is a pile of objects that might be a child's blocks, picture books and other toys.

She goes right to work on you. First comes the "wiggly block." It is like a three dimensional picture puzzle, a cube that has been carved into a number of irregular pieces. The girl lets you look at it assembled for a few moments, then scatters the pieces and tells you to put them together—as fast as you can. She starts her watch.

At once you fall into one of two classes of human beings. If you're one sort, you reach for the right pieces, slip them quickly into the right places in about 30 seconds.

Some throw the pieces away

IF YOU'RE the other sort, you try them this way and that way—and nothing fits. As the young woman looks on impassively you get nervous, start fumbling, try to force the pieces into place. It may be half an hour before you finally get it done. Some throw the pieces out the window.

The girl records your time. You have now been measured for one of the fundamental aptitudes, one that O'Connor calls structural visualization or "structure" for short. It is the most essential quality of engineers, architects, those who deal with machines. Fifty successful engineers were given the test—all were good with the wiggly block. Fifty other persons, not engineers but of more than average intelligence, were tested—the results varied but the average was far below the first group.

An engineering class at Stevens took the test. Ten years later, a survey showed that those who were good with the blocks had, nearly without exception, attained well-paying positions in engineering. Among those not good with the blocks, about the only successful members were those who had left engineering and gone into other activities. Of those who had remained engineers, the earnings averaged about one-fourth of those of group one.

The young woman hurries you on to the next aptitude—creative imagination. She gives you paper and pencil. "Suppose," she says soberly, "the earth were suddenly to stop turning on its axis. What ideas does that suggest to you? Write them down as fast as you can. Ready? Start."

You scribble furiously—or, you stare alternately at the paper and the stop-watch. After five minutes, "Stop," and your score is recorded.

Creative imagination, O'Connor says, is essential not only to writers but to salesmen, teachers, store-managers, research workers—a score of others. It isn't essential—indeed is probably a detriment—to foremen, diplomats, doctors, personnel managers.

This aptitude has been proved in the same way as was structure.

Other tests determine whether you are objective or subjective, whether you work best in a group or alone; if you have accounting aptitude—speed and accuracy in handling figures; if you have ability to fit together apparently unrelated bits of data.

Finger dexterity is measured by picking up tiny pegs, three at a time, and fitting them as quickly as possible into holes just large enough for them. Tweezer dexterity is tested by having you do the same sort of thing with tweezers. Oddly enough, the two aptitudes are not necessarily related. A man who went into surgery because of his ability to do delicate manipulation with his fingers might be making a serious mistake. He could find himself lacking in the faculty for handling small instruments.

By the end of three hours the young woman is through with you for the day. Next day you have another three-hour session by the end of which you have measured for 13 separate aptitudes.

These aptitudes are inherent, not acquired. It's true that some improve slightly with practice. In three months' practice with the little pegs you might improve

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H. ARMSTRONG ROBERTS

To be a good surgeon, a man must have tweezer dexterity and subjectivity, but more than that, he must possess the drive to develop his skills



EWING GALLOWAY

Tests show that to be successful at engineering, you must be good at structural visualization

Spending Won't Bring Prosperity

By HAROLD G. MOULTON

IN Government circles today, there are two opposing philosophies with respect to public finance:

The first, or traditional view, is that a continuously unbalanced budget and a rapidly rising public debt imperil the nation's financial stability.

The second, the new conception, is that a huge public debt is a national asset, and that continuous deficit spending is essential to prosperity. According to this view, the idea of a balanced budget is an obsolete economic dogma.

The traditional view is held by the United States Treasury, the Board of Governors of the Federal Reserve System, the President, numerous congressional leaders and many individuals occupying important positions in the Administration.

The new conception is supported by the National Resources Planning Board, Adolph A. Berle, Jr., Alvin H. Hansen, numerous other individuals high in government councils, and various groups not connected with the Administration.

The resulting conflict of views is the crucial economic issue of the day.

This issue is of immediate practical concern to every statesman who must make decisions vital to the nation's future welfare. Until it is settled, no unified plan for the postwar world can be formulated. Moreover, unless it is decided by actually thinking the problem through, it is likely to be decided by the trends of the times backed by the "educational activities" and pressure of the spending agencies, and *not* by sensible reasoning.

The new philosophy of public spending is an outgrowth of the disordered economic conditions of the early '30's but it developed to its present form gradually. In the depression days, unemployed workers, farmers and many business men needed financial relief. As a result, the Government made large outlays of public funds which it obtained by borrowing.

Both political parties, however, regarded Treasury deficits as unfortunate; and, among the many economic innovations designed to stimulate recovery, public spending at first occupied a subordinate place.

Only after the recovery of 1933 had failed to reach the stage of prosperity did attention gradually shift to the use of public spending as a primary force to promote recovery. During the early days of pump priming, its advocates contended that the budget would in due course balance itself—as a result of the simultaneous

(Continued on page 86)

MATERIAL for this article, and for another which will follow next month, were assembled by DR. MOULTON in the course of investigations on the subject of public debt undertaken for the Brookings Institution, of which he is president. For a fuller discussion of his point of view see "The New Philosophy of Public Debt," recently published by the Institution.

THOSE WHO urge a constantly expanding public debt as indispensable to prosperity base their case on three arguments:



1. That the United States has reached economic maturity and that further growth must be slow



2. That we have a chronic excess of savings for which investment opportunities are lacking



3. That business no longer depends on investment markets to provide funds for expansion

IF this is the case, then the Government must borrow to provide jobs, investment opportunities and national progress. Dr. Moulton, however, demonstrates that this proposal and the premises on which it is based are unsound

The Army's Big Navy Gets

By HERBERT COREY

THE UNITED STATES Army is the largest sea-going force in the world....

It may not have the greatest sea-going force—greatness being a matter of definition—but it is the largest by fleets.

The American Navy has many fighting ships and service craft. But the American Army has more keels under it. Great Britain is the foremost sea-faring nation. But Great Britain has no single force, naval or mercantile, which numbers as many as has our Army.

No one need know how many vessels the American Army operates today. But it began the war with the sizable fleet of the Quartermasters' Corps, which had been carrying soldiers and supplies to the ends of the earth for years. It took in no one will tell how many cargo and passenger vessels.

In 1942 it built 2,200 vessels and for 1943 the building will touch 3,900.

Its task is limitless. For each man taken overseas eight measurement-tons are loaded. This is the authoritative statement of Maj. Gen. Charles P. Gross, chief of the Army's Transportation Corps. Other estimates have run from seven to 15 tons. A ton to a ton and a half each month of guns, ammunition, food, medical supplies and other items will be sent to him. The sum depends on distance and conditions.

"Army vessels put into more than 100 ports," said General Gross. "Many have the most primitive unloading facilities. In the First War, we were able to get 40 per cent of our requirements in Europe. Now we are supplying our troops almost wholly from this side and providing quantities of materials for our allies.

"In the First War, the problem of supply was relatively simple. Today there is one vehicle for every six men in a motorized triangular division, and one for every four men in an armored division. A large part of Army cargo consists of bulky, space-eating items, such as planes, tanks and landing craft, which present difficulties in the way of loading and stowage without parallel in the First War.

"And Germany has centered a large part of her war effort around attacks on shipping by modern submarines having longer range, greater striking power and more advanced techniques."

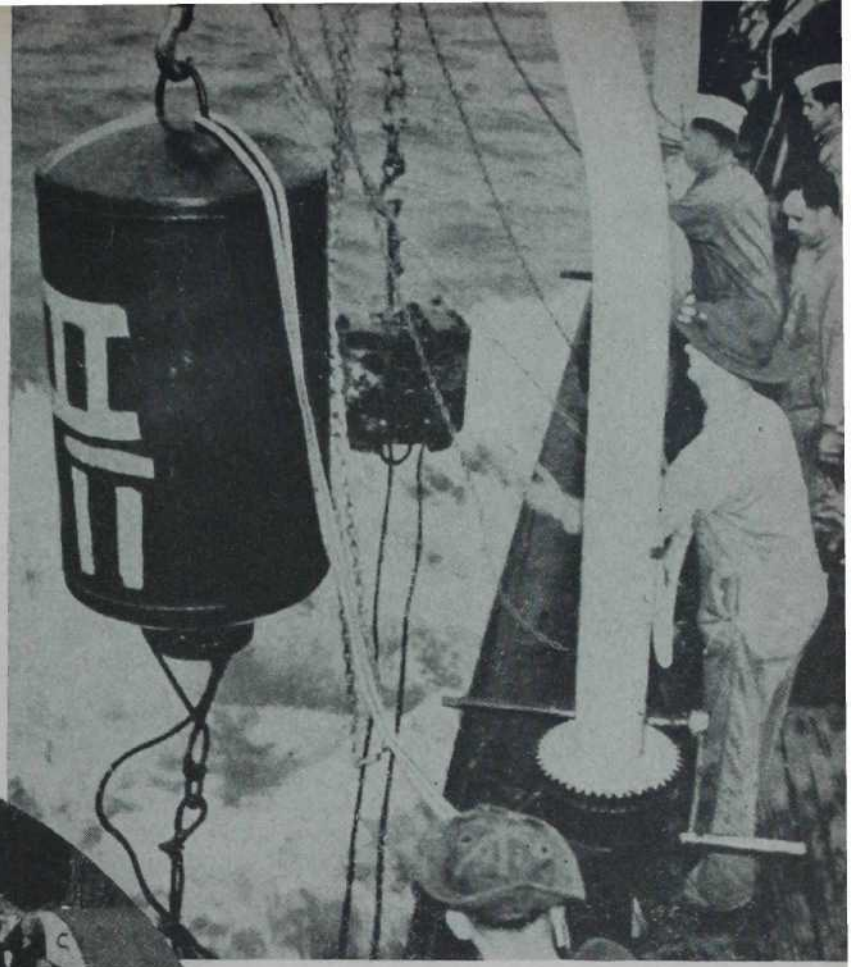
Army cargo, which now includes tanks, planes and landing craft, presents loading and stowage difficulties unknown in World War I



EWING GALLOWAY

Them There

AS AMERICA strikes its enemies on any world front, the success of the operation depends on a versatile fleet which, in number of boats, is larger than the Navy which protects it



U. S. ARMY SIGNAL CORPS

Mine layers must be able to go out in any weather—and come back



EWING GALLOWAY

Troops traveling in converted luxury liners sleep in pipe berths, take their sea air in relays

Likewise the Army's navy presents a greater variety of shipping than any other sea-going force. The dead-load cargoes are carried in freight steamers. The quantity may be guessed at from General Gross' statement that more than 18,000,000 measurement tons of cargo have already been shipped overseas, or twice as much as was shipped during our entire participation in the First War. The average overseas haul is twice as long.

It takes from 50 to 75 trains and about 2,700 cars to move an armored division with its 3,700 vehicles. To move it overseas with its reserve complement of equipment and supplies takes at least 15 Liberty ships in addition to the troopships. Some of the troopships were once plush-lined passenger steamers. Now they carry 5,000 or more men in comfort. The word "comfort" is to be read with a military accent. The men sleep in layers in pipe berths and take their sea air in relays.

Sea-going hybrid

ANOTHER Army craft skitters over five inches of swamp water behind an air propeller. The business of this boat is to rescue flyers who have crashed in marshes. The Army has a sea-going hybrid it affectionately calls a "duck," half truck and half landing boat. When it comes to a beach, the pilot shifts gears and up she goes into the country.

The Army also has boats that can run at 40 or 50 miles an hour and keep it up. They are, in a manner of speaking, built of sawlogs and remotely resemble Chesapeake Bay oysterboats. But they have what it takes.

Without the doughboys—the "poor bloody infantry" as the British call them—no conquered land could be held. The Army's navy carries the infantry to the places where it is needed, along with the things it needs. The intricate business of providing almost everything for the army is grouped in the Army Service Forces.

In the ASF is the Transportation Corps under General Gross. In the

Transportation Corps is Brig. Gen. John M. Franklin, Chief of the Water Division, who commanded the only unit of American heavy tanks to reach the front in the First War, and who later became President of the United States Lines. He directs all matters pertaining to transportation of the Army and its supplies by water, except coastwise, the maintenance and operation of vessels and shore establishments.

The Army's ships carried the expeditionary force to North Africa, with the aid of transports borrowed from the British. It is no secret that American strength in Europe is being increased in preparation for the next push.

These are incredibly complicated operations. Little may be said about them at this time, but it is known that the ships sail from many ports, move at varying rates of speed to meet at fixed destinations at an hour and a day specified. Innumerable factors must be considered. Ports of embarkation must be cleared so that the loading will not be impeded. The Transportation Corps rolls in trains from all over the country so their loads may be dovetailed into place.

When the Army's ship is loaded, it becomes the Navy's headache. It joins the other ships lying in the bay until a convoy has been put together.

Under Navy's wing

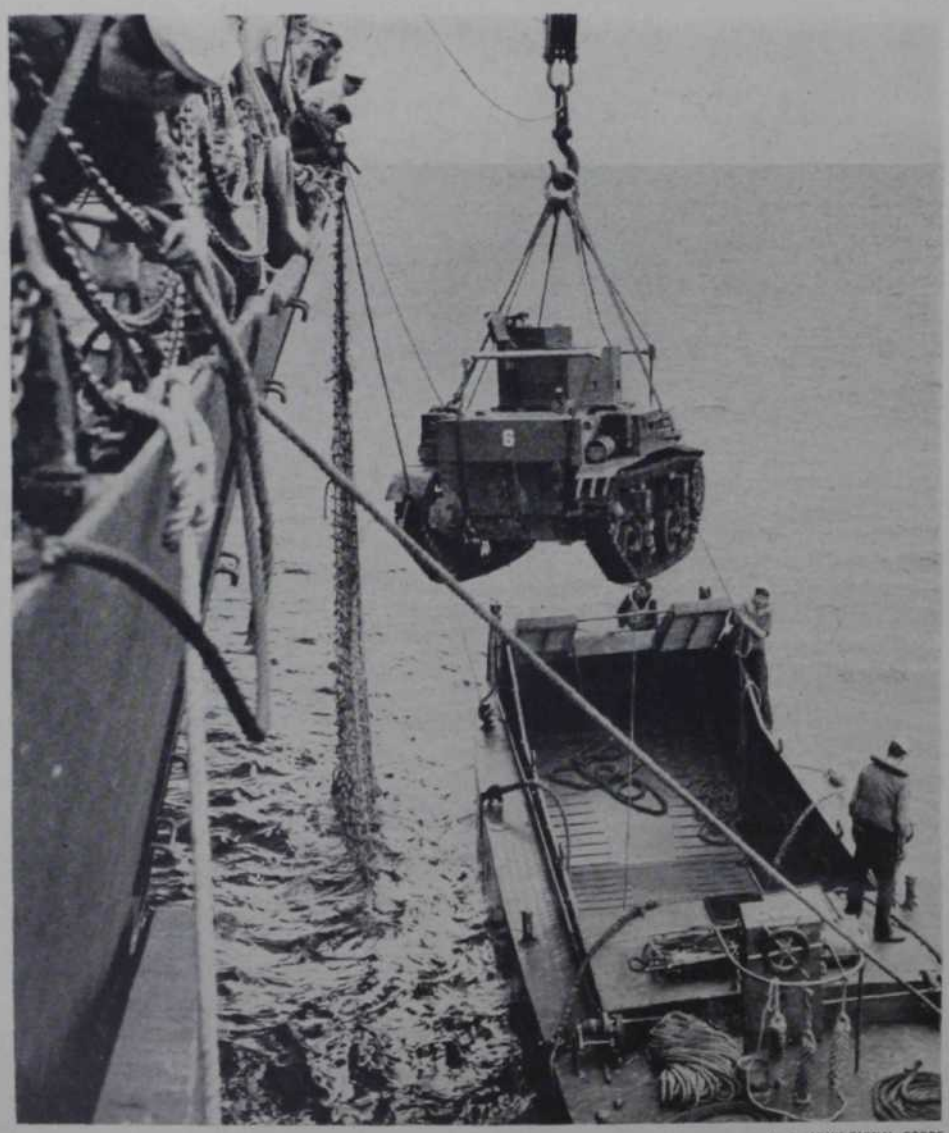
THE Navy does not want the Army's ships loaded and in the bay until it is ready to convoy them, and that readiness depends on sudden changes of plans, U-boat activities, Air Force umbrellas, destroyers available, and what not. All this under the extreme pressure of time and the absolute necessity of accurate synchronization.

At last the Navy takes the Army's ships under its protective wings and is off for the voyage.

The fleet convoys may be the most spectacular of the Army's seagoing operations. They are not necessarily the most dramatic. The Army found itself out of deep water in the Pacific when a landing was ordered. Somehow the Army purveyed canoes in which the men paddled ashore.

A routine affair is to cut a boat in two or three slices and load it on a ship's deck; then weld the slices together when the destination is reached. A barge may be about the overall dimension of the limousine in which a government officer's wife disports herself. A barge may also be an indefinite number of barges locked together and pushed or pulled by an Army tugboat. Some of the Army's vessels are armed and armored. Others, which used to be called bumboats, squirm up jungle creeks with fresh bread and soft drinks for the fighting men. Also, oddly enough, with plenty of dice. The official explanation is that the soldiers are nuts about parcheesi.

The Army Transport Service, made up of experienced civilian sailors under Civil Service, uniformed in dark blue in the winter and in white in the summer, mans the Army's ships. With the expansion of our sea-carrying business under the compulsion of war, the country faced a shortage of sailors. The Army found itself obliged to open schools to officers and, to some extent, convert landlubbers into shipmen. Because sailboats are useful in some areas, men who had hardly seen salt water were taught to handle catboats and yawls. When a landing boat is swung outboard from a transport or on occasion a battleship, its trained crew goes with it.



U. S. ARMY SIGNAL CORPS

Men not long out of the corn fields have learned to unload an armored division with its 3,700 vehicles at ports with only primitive facilities

Quick action on repairs

EACH Port of Embarkation has its own marine repair shop and some are equipped to handle full-sized jobs. A passenger steamer that has always plied on Long Island Sound may have its insides ripped out to accommodate the thousands of men who will be packed in, and its decks strengthened to resist the recoil of its guns. The next ship may be fixed up to handle tanks and landing barges along with the infinite lighter items, such as candy bars and surgical instruments. If a transport limps in after an encounter with a submarine, the Army has shops and drydocks where it can be put into condition again. The ASF allows nothing to get in its way. General Somervell's rule is:

"If local regulations get in the way, stretch hell out of them."

He has streamlined the ASF but, before he could simplify it, he was obliged to build it up. Before the Services of Supply—which was to become the ASF—was established on March 9, 1942, the administration of army

(Continued on page 91)



How life insurance dollars help produce steel for Victory

WHEN PEARL HARBOR CAME, Americans had reason to be proud that our steel industry was ready to beat our ploughshares into swords at an astonishing rate.

This year alone, American steel mills will have turned out the steel needed for countless wartime uses. Steel for an estimated 60,000 tanks, 90,000 airplanes, 15,000,000 tons of shipping . . . steel for guns, shells, and bombs. Steel for great cables like those that righted the *Oklahoma* and other battleships sunk at Pearl Harbor . . . steel for the fleets of scrapers and tractors that helped build the Alaskan highway.

Result of courage and faith

These contributions to our war effort didn't just happen by accident. Long before Pearl Harbor, farsighted steel management had the courage and the faith to increase steel capacity far beyond immediate needs.

Management was able to do this because of our natural resources, our native ingenuity, the skill of American manpower . . . and the millions of dollars invested in industry by people who have faith in America's future.

Among these are the policyholders of America's life insurance companies. Through their companies, 67,000,000 policyholders have invested about $1,750,000,000 in the bonds of industrial concerns. Of this amount, more than $350,000,000 represents investments made by Metropolitan for policyholders.

These investments have been made not only in the steel industry, but in the aluminum, rubber, oil, chemical, and many others. Our war effort requires maximum production in these industries. This production could not have been attained without adequate financial backing. Every life insurance agent who persuades some individual to provide or retain life insurance is the means of making life insurance dollars available for such investments.

Today—war comes first

Today, most of Metropolitan's fund available for investment is going into United States Government Bonds to help finance the war. When the war ends, the dollars that policyholders have set aside to insure the security of their families will again be ready to support and encourage sound and stable peacetime industries.

Steel, for example, is already doing its postwar planning. The present feats of that industry are an indication of what we may expect in steel for better peacetime products, ranging from railway equipment to kitchen cabinets, and from automobiles to bread knives.

Planning for the future

Just as life insurance policyholders contributed to our present industrial capacity, every one who uses life insurance to plan his own future is helping, through payment of premiums, to underwrite industry's postwar planning.

For Metropolitan's 30,000,000 policyholders have faith in the continued and growing greatness of their country.

BUY WAR SAVINGS STAMPS FROM ANY METROPOLITAN AGENT, OR AT ANY METROPOLITAN OFFICE

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The Quagmire of Subsidies

By LAWRENCE SULLIVAN



That merry-go-round has been whirling for three years and some people are already getting dizzy

WITH the world depending on us for food, should we permit ourselves an experiment which, many declare, will cut food production?

OPA's program to roll back the retail prices of meat, butter and coffee —a program which doubtless will spread to other food items—introduces vast new wartime problems for the canner, dairyman, meat packer and the corner grocer. Can consumer subsidies hold prices down while raw material costs are rising, and increasing industrial pay rolls pour more purchasing power into the markets?

America's food bill (including restaurants, public institutions and direct military supplies) now totals about $30,000,000,000 a year, at current retail. A ten per cent rollback would call for about $3,000,000,000 from the Treasury—if everything worked out according to plan. But experience has taught that hastily devised emergency programs sometimes go off on tangents. Can we risk an uncharted venture into the quicksands of consumer subsidies at a time when our U. S. food supply is recognized everywhere as the keystone of the United Nations' global war mobilization?

Price Administrator Prentiss Brown finds tenuous authority for subsidy payments in the original Price Control Act of January 30, 1942. Section 2 (E) authorizes the OPA Administrator to "make subsidy payments *to domestic producers* of such commodities, in such amounts, and in such manner, and upon such terms and conditions as he determines to be necessary to obtain the maximum necessary production thereof."

Opponents of the subsidy program insist that this language limits government payments to *producers*. Instead, it is argued, subsidies now are being paid to *processors* in such a manner that they do not directly stimulate increased production. As Sen. Joseph C. O'Mahoney, of Wyoming, pointed out in debate on June 15, a law which authorized subsidies to producers actually is being applied at the consumer level.

"We are subsidizing consumption and endangering production," he said.

Our war experience with government-controlled wheat prices illustrates the economic background of the subsidy debate. In 1941, when wheat was selling at 75 cents a bushel, the government loan rate for wheat was fixed at $1.15 a bushel, Chicago. On the 1942 crop, the government loan was hiked to $1.31, Chicago.

Forcing prices up

THIS year, the price peg has been advanced again, to $1.40, Chicago. Here we have a three-year policy of forcing prices upward through government programs. In those three years flour advanced from $4.50 to $7 a barrel. Now, when the consumer protests that living costs are too high, the Administration answers that subsidies must be tried.

Under the 1943 wheat loan, Minneapolis flour costs 9½ cents more to produce than the present wholesale ceiling price, as fixed last year by OPA on the lower wheat value. The remedy advanced by Washington is to hold the old flour ceilings by allowing the Treasury to pay the 9½ cents to the flour millers. Thus, prices are advanced by federal subsidies to the producers; and then a second subsidy

Every branch of the Armed Services uses the telephone. No. 5 of a series, Marine Corps.



Some day Johnny, front line observer, will climb out of his last foxhole into a world freed from fear of dictators. When that day comes, the telephone—now speeding commands on the battlefront and production on the home front—will help to place all peoples of the earth on friendly speaking terms.

Western Electric

IN PEACE...SOURCE OF SUPPLY FOR THE BELL SYSTEM.
IN WAR...ARSENAL OF COMMUNICATIONS EQUIPMENT.

is proposed, at the processor level, to prevent a rise in prices to consumers.

Through similar programs, federal management has pushed up the price of milk, cotton, meat, hides, wool, corn, fats and oils—all the basic factors in the cost-of-living index. Manifestly, while all these programs were operating to advance prices, labor would not assent to an order freezing wages. Nor would the agricultural interests assent to an order freezing farm prices, until wages were pegged. That merry-go-round has been whirling at ever-increasing tempo for more than three years, and some folks now are getting dizzy.

Advocates of U. S. food subsidies lean heavily on the fact that Britain has adopted them. But they often ignore the news that, in Britain, subsidies are a part of an integrated national stabilization program which includes effective wage control, high taxes, adequately enforced rationing, practical price controls, and absolute control over supply of all imported products.

In the United States, on the other hand, wage controls have been extremely shaky; new taxes have lagged behind the increase in national income; and many of OPA's price controls have proved largely ineffective. Until these primary cost factors are controlled, food subsidies could only add fuel to the inflation inferno.

Different situation here

OUR situation differs from Britain's in many other respects. Britain normally imports 60 per cent of all her food, and can control food prices by controlling a few hundred shipping terminals. Our controls must reach to the production and storage facilities of more than 6,000,000 farms. From every consideration of practical administration, these are fundamental differences in the problem.

The British Government inaugurated food subsidies in December, 1939, three months after the war started. The subsidies were directed particularly to those food items included in the cost-of-living index, on the theory that stabilizing this index would remove all leverage for wage increases. The British subsidies applied to meat, fish, flour, bread, tea, sugar, milk, butter, cheese, eggs and potatoes—practically all *imported*. Wages in Britain thus have been under relative control and stabilization.

Two types of subsidies were applied. First, the Ministry of Food sold imported articles to processors at less than the landed cost. Second, it made direct payments on other items to retailers, wholesalers and processors to absorb abnormal war cost of domestic transportation, insurance and distribution. At the outset, the Food Ministry estimated, these subsidies would cost $232,000,000 a year. By the end of the second year, however, they were costing $580,000,000.

As of April 1, 1943, the total cost of food subsidies in Britain stood at $1,600,000,000, almost three per cent of the total British war budget. President Roosevelt estimated last month that U. S. food subsidies might cost $1,500,000,000 a year, or 1½ per cent of our war budget. Some reputable economists have estimated that a general subsidy would cost $5,000,000,000 a year.

Coupled with its subsidy program, however, Great Britain applied a scheme of taxation and public finance which diverted most of the increased war income from public markets. For the first four years of the war, Great Britain covered 44 per cent of her budget by taxation and 41 per cent by the sale of government securities to individuals. This left only 15 per cent to be financed by sale of securities to banks.

In contrast, the United States has collected barely 25 per cent of her war spending in taxes, leaving almost 75 per cent for deficit financing; and a large proportion of this deficit has been floated through direct sale of bonds to banking institutions. This enormous generation of new bank deposits accumulates vast reservoirs of buying power to press constantly against limited or diminishing supplies. This is the essence of inflation.



The butcher must be able to identify every carcass all through his plant

Too much spending money

IN Great Britain, approximately 75 per cent of the *increased* national income between 1938 and 1942 was diverted to the Treasury by higher direct taxes. In the United States, only about 33 per cent of the increased national income has been skimmed off in direct federal taxes. Thus, England has an "inflation gap" representing 25 per cent of her increase in national income, while ours is 60 to 65 per cent of the war increase.

Opponents of U. S. food subsidies contend that no price control mechanism can be effective against such overwhelming pressures of available spending money. The real attack on rising prices, they insist, should come through taxes and effective wage stabilization. In addition to her higher income taxes, Great Britain also collects a graduated *sales tax* on all items except those which go into the basic cost-of-living index. Our new 20 per cent pay roll tax is a beginning in this direction. But this pay roll deduction is in *lieu* of the income tax and not an addition, as is the sales tax in Britain.

In its original application, a subsidy is a government bounty paid to producers to call out increased production. But nowhere have today's food subsidies been defended on the ground that prevailing prices are too low. Our lagging farm output is attributed, instead, to shortages of manpower and equipment, and to crippling dislocations between *different levels of prices* along the distribution line, as fixed arbitrarily, and often inexpertly, by OPA.

The cattle feeder, for example, does not complain that beef can't be produced at $14.50 per hundredweight. All he says is that no stockman can produce beef at $14.50 per hundredweight while government pegs basic feed stuffs at a level which requires him to spend $17.32 to produce 100 pounds of beef. The same principle applies to dairy production, to eggs, wool and poultry. Having created

(Continued on page 64)

Logistically speaking



THE STRATEGIST:

"Logistics is the science of military transport and supply."



THE RAILROAD MANAGER:

"Logistics is moving a company, a regiment or a division with their matériel wherever the army says."



THE RAILROAD WORKER:

"Logistics? I call it railroadin', with every man jack on his toes to get the world's most important trains over the railroad on the army timetable!"



THE SOLDIER:

"Logistics to me means pack up and pull out on the double. And believe me we go places fast."



SUPPLYING the world's fastest growing army with transportation is one of the many complex problems that come under the military term, "logistics." In this connection, according to Maj. Gen. C. P. Gross, Chief of Transportation, Army Service Forces, "the railways have more than justified the confidence reposed in them by army men."

So far in this war, the movement of war traffic has been more than *four times greater* than it was in World War I. And to make this accomplishment possible, the Office of Defense Transportation, the Army, the Navy and the Railroads are steadfastly working shoulder to shoulder, during every hour of every day.

Each step in planning and executing a mass military move on the railroads is worked out with such straight-line efficiency, timing and teamwork that there is complete freedom from delay and confusion. But "behind the scenes" it takes "know-how" and toil and sweat and 'round-the-clock vigilance.

Thanks to a closely knit army-navy-railroad set-up, millions of fighting men have been moved on schedule. The flow of millions of tons of supplies has been speeded. Delays at ports have been avoided.

What an example of an aroused democracy at work and at war! The battle before the battle is fought on the railroad front and The Milwaukee Road is proud to be one of America's Railroads—*all* United for Victory.

CHICAGO MILWAUKEE ST. PAUL AND PACIFIC

THE MILWAUKEE ROAD

SERVING THE SERVICES AND YOU

Government's Biggest Business Man

By LARSTON D. FARRAR



SAM HENRY HUSBANDS, president of DPC which owns 1,590 plants worth $9,500,000,000, finds time to fill eight other important government jobs

SAM HENRY HUSBANDS, in the words of an associate, is "one of the damnedest cusses you'll ever meet. He is living proof that all the maxims about getting ahead are wrong, and he bears on his body the scars that prove the old saying: 'You can take a boy out of the South, but you can't take the South out of a boy.' "

Because he has never gone to college, has never taken a correspondence course, has never studied law, has never read an economics book, Sam Husbands is regarded as the most informally educated man in high position in Washington. Despite all of these "lacks," he has jobs that demand a trained mind, a mass of information and keen judgment.

He is president of Defense Plants Corporation, which owns 1,590 industrial plants whose overall value totals $9,500,000,000—the largest single industrial combine in the world.

He is president of Federal National Mortgage Association, known as "Fanny May" in Washington because of its initials—FNMA.

He is a director and past president of Defense Supplies Corporation which has billions of dollars invested in strategic materials.

He is a director of Reconstruction Finance Corporation Mortgage Company.

He is a director of War Damage Corporation.

He is a director of the Anglo-California Bank of San Francisco in which RFC has $20,000,000 invested in preferred stock.

He is a director of Metals Reserve Company which owns more strategic metals than any single private industry.

He is a director of Rubber Reserve Company which will soon operate a greater productive capacity for synthetic rubber than any other company.

He is one of five directors of the Reconstruction Finance Corporation.

Until 11 years ago, Sam Husbands was known to less than 100 persons outside the section surrounding the little town of Florence, S. C.

At 52, Sam Husbands looks like a man of 35. In his various positions, he has his fingers in more and bigger business pies than any South Carolinian who has ever lived yet, when he goes back to Florence each summer to visit his relatives, there is no fanfare. He is Florence's most noted "native son" but, of the 16,054 persons who live there, few realize who Sam Husbands really *is*.

Despite his apparent lack of fame, Mr. Husbands, together with his four colleagues on the RFC board, all of whom hold offices in the various corporations formed under their tutelage, must make momentous decisions.

These decisions center around the large map on the wall facing his desk—a map which shows graphically every county in the nation and every plant built by the Defense Plants Corporation since its formation on August 22, 1940. There are two kinds of pins in the map. One kind is yellowish. There are 62 of these, representing primary air schools built with DPC money and leased to private operators.

The other pins—1,528 of them—are red, and denote the plants built by DPC. It is not difficult to get Mr. Husbands to talk about these plants, each known as a "plancor" to him. These "plancors" can be broken into groups, according to products manufactured:

Aircraft, aluminum, aviation gasoline, chemicals, machine tools, magnesium, minerals, ordnance, radio, ships, steel, rubber and miscellaneous, which includes jewel bearings, diamond dies, hemp, detinning, heavy machinery, military trucks, military medical supplies. By far the largest group is aircraft. DPC owns more than 600 aviation plants.

Designate "plancors"

THOSE red-headed pins designating "plancors" can be classified in yet another way—how each "plancor" is operated. DPC owns them all but operates only 23, paying the personnel. These plants make steel, rubber, aluminum and magnesium, for the most part, but include a new tin smelter in Texas.

The remainder are leased to private operators. In virtually every case, the private company leasing a "plancor" (and "plancor" may mean anything from one machine to acres of plant capacity, fully equipped) has signed a contract by which the company may buy the plant outright after the war. These purchases can be made under two conditions, as long as the present

(Continued on page 80)



(These pictures illustrate methods used—have no connection with actual enemy spy activities)

SPIES' MEETING PLACE . . . To get evidence that will convict, investigators may conceal a Ciné-Kodak in an adjacent room, make thousands of feet of movies of such "business conferences" as that shown here. How the Ciné-Kodak is sound-proofed and arranged to "see" through an innocent-looking wall . . . and other photographic details necessary for satisfactory results . . . can't be told now.



A CASUAL LETTER loses its "innocence" when a Kodak film, with the aid of ultraviolet rays, discloses the real message—in invisible ink.



BURNING an incriminating document no longer safeguards an enemy agent—Kodak Infrared Film makes fragments of charred paper readable.

"SECRET AGENTS" not so Secret to Kodak's special-purpose films

"MUGGING" the criminal—taking his picture "full figure, full face, and profile"—is the widest use of photography by the police. That's useful—after he's caught.

But first, catch him . . . be sure he's the wanted man . . . get evidence no jury can question . . . these are counter-espionage activities which photography has made an exact science.

A jury will believe what it sees with its own eyes. Photography makes this possible. Cameras are often on the alert near the meeting places of suspected enemy agents—even their "casual" meetings on the street.

Kodak special-purpose films find unseen fingerprints on surfaces dusted with a fluorescent powder . . . unseen chemical erasures, or bloodstains on cloth, when illuminated by infrared or ultraviolet rays . . . telltale differences in ink, or ink strokes, on a document which has been tampered with . . . can even photograph a man in absolute darkness, with the aid of invisible infrared "light."

* * *

And photography isn't finished with the enemy agent when he's trapped. Through Kodak's *Recordak System*, the "records" . . . photographs, fingerprints, and police history . . . of 3,000 criminals can be condensed on one small roll of 16-mm. film—for future reference . . . Eastman Kodak Company, Rochester, N. Y.

Serving human progress through Photography



Beautiful...but Deadly

EXPLORERS will tell you that the greatest dangers in jungles are not poisonous snakes or vicious beasts, but insects. Mosquitoes that carry malaria, and other winged carriers of dangerous diseases are eternal enemies of man.

Yet American fighting men must enter jungles and other insect-ridden spots of the earth and live in them. But these men do not go unprotected. They have new weapons in the fight against insect-borne disease. One is an insect repellent, more powerful than any known before, developed to make insects keep their distance from human prey.

This product is the result of a cooperative research program by two Units of UCC, CARBIDE AND CARBON CHEMICALS CORPORATION and NATIONAL CARBON COMPANY, INC., in which more than 600 chemical compounds—many of them unknown before—were synthesized and tested.

Other forms of protection are anti-malarial substances . . . superior to natural quinine in some ways ...now being made from synthetic organic chemicals. Several of these chemical raw materials are among the 160 developed and made commercially available by CARBIDE AND CARBON CHEMICALS CORPORATION.

Now that sources of quinine, used in combating malaria, are practically all in enemy hands, these developments are of particular importance. Together with the accomplishments of other organizations, they will help reduce the incidence of malaria and other insect-borne tropical diseases . . . and thus aid in keeping American fighters healthy and effective.

Long and continuous research by all UCC Units has contributed to advances in science which have helped bring better health to millions. Such research, greatly intensified by the needs of today, promises much for the future.

BUY UNITED STATES WAR BONDS AND STAMPS



MEDICAL METALS. New stainless steels and other alloys...made possible by UCC basic research...have meant better hospital and medical equipment.



BREATH OF LIFE. LINDE oxygen U.S.P. is used in treating over 20 different ailments. It provides the breath of life in hospitals . . . and in the substratosphere.



Rx PLASTICS. BAKELITE AND VINYLITE plastics, creations of UCC Units, have resulted in better paints, floor coverings, hospital sheeting, and other improvements.



WHITE MAGIC. Carbon, blackest substance known, works white magic in "sun" lamps, increases vitamin D in milk with ultra-violet light, and thus aids health.

UNION CARBIDE AND CARBON CORPORATION

30 East 42nd Street UCC New York, N. Y.

Principal Products and Units in the United States

ALLOYS AND METALS
Electro Metallurgical Company
Haynes Stellite Company
United States Vanadium Corporation

CHEMICALS
Carbide and Carbon Chemicals Corporation

ELECTRODES, CARBONS AND BATTERIES
National Carbon Company, Inc.

INDUSTRIAL GASES AND CARBIDE
The Linde Air Products Company
The Oxweld Railroad Service Company
The Prest-O-Lite Company, Inc.

PLASTICS
Bakelite Corporation
Plastics Division of Carbide and Carbon Chemicals Corporation

Capital Scenes . . . and What's Behind Them

Explorations at recess

THE Congressman said he'd write after he'd been home a few days and let us know what the folks are thinking. He thought he knew, he said. Lord knows he has been getting letters enough. But there is something inconclusive about the letters a congressman gets. His constituents do not write until they are angry about something:

"Then they jam a crown of thorns down over my ears."

But when he walks down Main Street he knows what they are thinking about. They don't have to tell him. If a steady voter gives him a hand like a dry oyster and says, "Hello, Jim," in a kind of withheld voice he knows he had best get busy. The Congressman says he wants to come back to Washington.

"Shucks," he said, "we all do. The lame ducks you read about opening law offices in Washington when they lose their jobs would be bigger men at home, but Washington is in their blood. They want to pretend they are in the thick of things. The only way they could get in the thick would be to shove Harry Hopkins and Dick Gilbert and Benny Cohen and Eddie Prichard out of the way. Try and do it."

Not a capital city

MOST every one who can use a typewriter has already written that Washington is a mess, the Congressman said. But, if his interlocutor would take a tip from a boy from the country, the commentators have failed to see what Washington really is. Never mind the crowds and the hot beds and the restaurants locked against hungry people because they have no ice and no OPA permission to buy food, and the mob scenes at the station. Washington, he said, is the so-called capital of a nation of 135,000,000 exasperated people in which most of the levers are pulled by people who learned to think in Europe.



"I am no one-man Dies Committee," said the Congressman. "Not many of these thinkers are subversive. It's only that they are either Europe-born and educated, or they are Americans who have studied abroad, or they have been taught by professors who have been taking sabbatical years in European towns that have stinks in the alleys.

"Some of them worked their way across on cattle boats and got to be professors when they come back home. Disorder," he said, "is painful to a professor. They fall for these racked-up European towns with a cop on every corner and forget that there is nothing so orderly in God's world as a corpse.

"They want to take the zip out of American life. They've been kind of funny to us," he said, "but they certainly have moved into Washington."

The old-time religion

THE Congressman said he thinks the Swamp Fox will save us yet. The Fox and General George Custer and his 264 men who died around him and Stonewall Jackson and the Alamo and the men who fought at Bunker Hill. He said he wanted to get in touch with them and their likes again and forget about Laski and Spengler and Marx and Lenin:

"You'd be surprised," he said, "to know how strong is the American tradition back home. Or maybe you wouldn't be. You come from a kind of a backward section yourself. I'll bet there are folks in your part of the country who don't give a damn right now what the Europeans think we ought to do for them. Like enough Great-grand-pap's squirrel rifle still hangs over some of the fireplaces. I got families in my district that sent fighters to every war since 1776."

They keep the American tradition alive, he said. The New York *Times* found that American teachers do not know enough about American history to teach it, but the only thing that proved is that we've been hiring the wrong teachers. The teachers might think that over before they come to Congress next time rubbing their hungry stomachs.

He's collected evidence

THE voters in this state, he said, can turn on a dime. They go along, being reasonably docile for two or four years and then they lope into town with their coats flapping. The governor of his state wrote him after that Governors' Conference at Columbus that there is something stirring:



"That was the only conference I ever attended," he wrote, "at which we talked about the good of the nation instead of politics. I tell you, we're scared. The reporters came out there to find out what's cooking politically, but the governors were not bothering about Dewey or Bricker or Willkie or this youngster from California. Of course, we talked about 'em. Politicians can't help talking politics. But we mostly felt that our job is to go American again."

On the sawdust path

THE Congressman said he hoped his folks back home would understand that at last he's got the hang of the thing. Congress, he said, had been confused. Congress had never been shown a program but had just been offered a cherry at a time, and some of the cherries were mighty enticing. The governors were worried about the centralization of power at Washington. So is Congress. That's why they knocked off the National Resources Planning Board. It had been getting out the nicest reading matter you ever read but it all pointed toward putting someone like Harry Hopkins on the steps of a throne. He liked Harry, he said. Harry is a nice, affable, lively young fellow. But he doesn't like him well enough to chip in to buy him an ermine cape.

Obey laws and not bosses

SOME automobilists in Illinois had been arrested for running faster than the OPA desired. He—the Congressman—thinks they were a lot of skunks for doing so. Gasoline is the bloodstream nowadays and they were wasting it. The judge supported this. But he ruled that the OPA has no authority to arrest motorists for disobeying its orders:



"It may be a clumsy way to reach a good end by enacting a law and then enforcing it," the judge said in effect. "It is quicker and easier to issue an order. But as long as we are a people under law we must accept our clumsy, slow and imperfect laws and not permit well meaning officials to tyrannize over us by regulation."

The governor of one state issued a statement to his people along the same lines.

The seizure of papers

NEXT it was charged in the House inquiry into the acts of the Federal Communications Commission that the FCC had sent agents to Albany, Georgia, and "rifled the files" of the Albany *Herald*. The material was taken to the FCC offices in Washington. The Congressman said he had muffed this. There are so many things going on that he forgot about it. Then he read a paper signed by two members of the New York bar—William M. Wherry and Albert S. Bard—in the *Public Utilities Fortnightly*, and learned that 200 years ago the Court of Common Pleas in England ruled that the seizure of private papers was a trespass although the King's Messengers had acted under the authority of a warrant.

"It is very certain," wrote Lord Camden, "that the law obligeth no man to



Rails to VICTORY

Hitler counted on his superhighways to carry his war transportation load.

Now, he is learning too late what America knows: that mass railway transportation is vital to mass production and movement of war materials and mass movement of fighting men . . . that a vast network of steel rails unites every part of this land. He is learning about, and feeling the effects of, America's war production, which keeps the rails humming all hours of the day and night, with the movement of one and one-third million tons of freight a mile every minute and more than 2,000,000 fighting men a month. He is learning how American railroads, and their loyal employees, are performing the biggest transportation job the world has ever seen.

Above all, Hitler and his "supermen" will learn in the months ahead that free enterprise and the free people of the United Nations will win unconditional surrender from their enemies.

Norfolk and Western Railway

ONE OF AMERICA'S RAILROADS
. . . All UNITED FOR VICTORY

BUY MORE WAR BONDS

accuse himself. . . . It would seem the search for evidence is disallowed on the same principle."

The authors quoted scores of cases in which courts in the United States supported the right of the individual to be secure from search and seizure.

"By concessions the individual may be held to have waived his rights" in what has sometimes "been termed an age of lawlessness." . . . "Perhaps the surest way to lose a constitutional guaranty is by imperceptible attrition." The Congressman thought we'd better quit waiving.

Twelve states in defense

IT IS the stated plan of the Administration to take as much money from the individual as is possible through taxes. This is in part because of the urgent need for more money for war purposes and in part on the theory that inflation may be avoided if the citizen has less money to spend. The Congressman pointed out that the less money the citizen has in hand when the war is ended, the more difficult it will be for him to enter into private business.



"And the easier it will be for government to obtain control of such enterprises."

He had learned from Col. O. S. McGuire that this fact is being considered in that part of the country which is not Washington. Twelve states have taken legislative action looking toward the adoption of a Constitutional amendment limiting the right of the federal Government to take from the citizen in taxes more than 25 per cent of his income. The Congressman said this was another thing that had started him to thinking. That might be one way to stop the Government in its game of winner take all.

He wants to know

THE Congressman doesn't like what he has heard about our plans for a postwar heaven. We are getting ready to run our brand on a herd of islands, he has been told. That's all right. Like enough we need 'em. But we used to call that kind of thing imperialism. The Dutch Government has been growling about the Four Power proposition to take police charge of the world after victory is won.

The Dutch say, if that is democracy, they must buy a new dictionary. The Congressman thinks it is just the old Congress of Vienna painted up. He thinks that, if his constituents find him promising to give away their tax money after the war even to the nicest small nation, they will make him hard to catch.

How about Combined Chiefs

HE REALIZES, he said, that Europe thinks diplomacy is a thing to be kind of bootlegged to the peoples. Wilson tried for open agreements openly arrived at and, when he got through, he found they were not open and they were not agreements, and the United States never did arrive at them. He just wants to be assured that no one drops a toad in our coat pocket this time. A committee representing the United States and Great Britain and Canada is at work right now to agree on how many seagoing vessels and of what type each will have after the war:

"That may be all right. We know now that we must have a top-notch cargo fleet or we will not get the business."

But how come the Combined Chiefs of Staff have the final word if the committee disagrees? Have we already gotten into a military alliance? Is some other nation's soldier going to tell us how many bottoms we may have?

Did Jesse start something?

HE THINKS that, when Jesse Jones went southwestern with Henry Wallace about the Vice President's desire to give away a lot of our money to an affiliated but inactive United Nation, he may have untied a dog:



"All of us statesmen on Capitol Hill," he said, "talk politics when we are not wearing our souls to the bone for the nation's good. We know Jesse. He is a stubborn, slow-talking guy who doesn't get mad very fast but does get very mad slowly—if you know what I mean. Supposing they rowel Jesse until he comes out a-bucking on a platform of common business sense and makes a run for the presidential nomination? Just supposing. It looks like it's in the bag for Roosevelt, but there's a lot of southern delegations that are twisting around in that bag, and Jesse is right well liked down there. We statesmen are considering possibilities for 1944. That's why this congressional recess is going to be so grateful to us."

A dash of cold water

NO one would dare quote a Combined Chief of Staff. The Combined Chiefs lay out the overall strategy. They make the plans for battles and campaigns. The policies are for the statesmen. But——

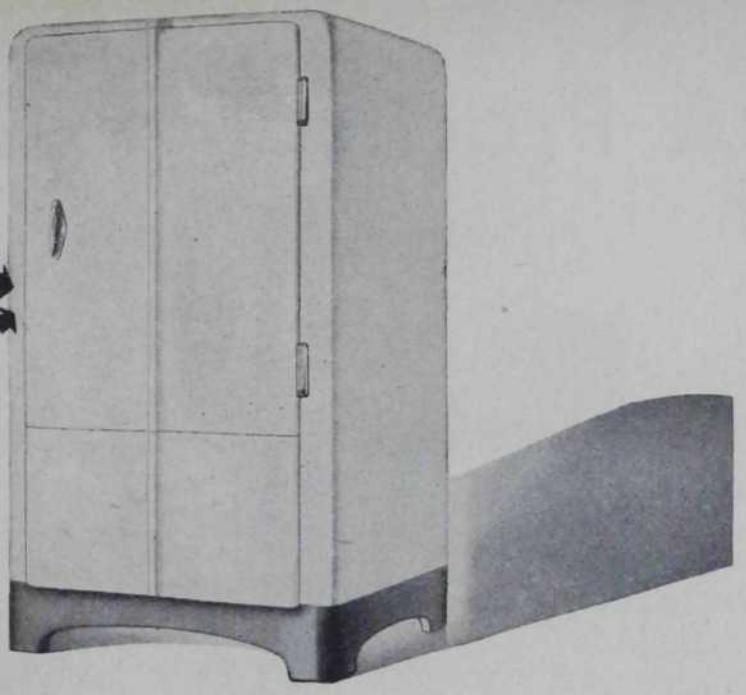
"The Allied team is the finest thing ever seen in war since Genghis Khan civilized the early Germans," say those who might reflect the Combined Chiefs. "But——"

We are only starting. Our men and guns and planes and wheeled vehicles are easily tops. But we haven't touched the inner strength of the enemy yet. To get at it will be a slow grind. Germany will be smashed in 1944—the Japs in 1945. The word—mark it—is "smashed."

Herbert Corey

WHY OPEN WIDE TO SEE INSIDE?

WHY? WHY? WHY? WHY? WHY?





WHAT'S SO SECRET ABOUT A REFRIGERATOR?

Does a refrigerator *have to be* a hideaway?

Think how much more convenient it would be if one could see inside without opening the door. See what food is on hand . . . where it is stored. Figure also how much more efficiently and economically it would operate if a housewife could do her inside looking without wasting refrigeration.

All right. Why not make it that way? Why not open it up with glass? The door. The shelves. The partitions around the special storage compartments. Add to the convenience of the modern refrigerator the utility of clear vision.

Research has fitted glass for this and many other practical uses. To its unequaled and lasting transparency, glass now boasts many amazing qualities that fit it for jobs never dreamed of before.

Did you know? Glass can be made stronger today than many metals. It is one of the most chemically stable of all materials. More dimensionally stable, too. Its surface is among the hardest in the world. Nonporous. Acid-resisting. Unusually resistant to abrasion. Its weathering qualities are unequaled. You can obtain it in polished flat sheets or bent shapes; laminated or fabricated with another material. And you can have it in the most efficient multiple insulating units.

Just remember, when you design or redesign anything for the home, for industry, or for any structure today, there's a material that you can see through, that lets light through, that's strong and long-lasting. It's glass. Libbey·Owens·Ford glass, of course.

Perhaps glass fits your product or plant. Won't you write us about any use that interests you? That's the way to really find out. Libbey·Owens·Ford Glass Company, 1483 Nicholas Building, Toledo, Ohio.

Destructible?

Wood-Metal-Plastics-Glass. No material is indestructible. However, barring unseen conditions, no material will fail on a job in which it has been properly specified and engineered. When our application engineers say "Yes", you can be sure about glass.

LIBBEY·OWENS·FORD

A GREAT NAME IN *Glass*

A Practical Postwar Program

By Senator ALBERT W. HAWKES of New Jersey



EDWARD F. WALTON

Whether or not the soldier will have a job when he returns depends almost wholly on the program which we draw up now

SENATOR HAWKES speaks as a man who was there. Within 24 hours after the Armistice in the last war, he was on the receiving end of 68 telegrams cancelling war orders for hundreds of thousands of tons of chemicals produced by his company. Some of the company's plants were forced to close down at once and lay off their employees. A few were able to keep going, but *only* because of available reserves permitted by World War I tax policy.

Today Senator Hawkes is working to prevent a repetition of that 1918 experience, which on 1943 scales would be disastrous to many great war industries and to millions of workers. Our postwar course must be charted *now*, he contends, if private industry is to be enabled to carry on when the confetti flies and the whistles blow at the end of World War II. —THE EDITORS

HAVE you noticed that you have a new partner in your business?

He's taken over the controlling interest, whether your business happens to be selling hard-to-get cuts of beef over the counter, or building equally scarce locomotives.

Perhaps this new partner has expanded you to ten times your normal size. Or perhaps he has decided to close you out. This he can do simply by turning over the necessary materials to some other business in which he is interested. Or by declaring the whole works to be unessential just now.

He has plenty of power, and exercises it freely. Either you follow his orders or clear out. He takes quite a respectable share of the profits—80 per cent in most cases.

This new partner, of course, is government. The partnership has been completed under conditions of war, through the essential induction of all our forces, productive as well as military, in the prosecution of an all-out war.

It has given us a taste of government in partnership with business. The flavor is vastly different from that of the free initiative system that developed in America the greatest productive capacity in the world, and the highest standard of living yet known to the human family.

Free enterprise in danger

IT HAS also set the stage for the loss of the very freedom for which American men are fighting. Unless, at the close of this war, this partnership is dissolved and the present government controls are released promptly and as completely as is consistent with the true welfare of a free people, the free enterprise system that has made this nation great no longer will exist.

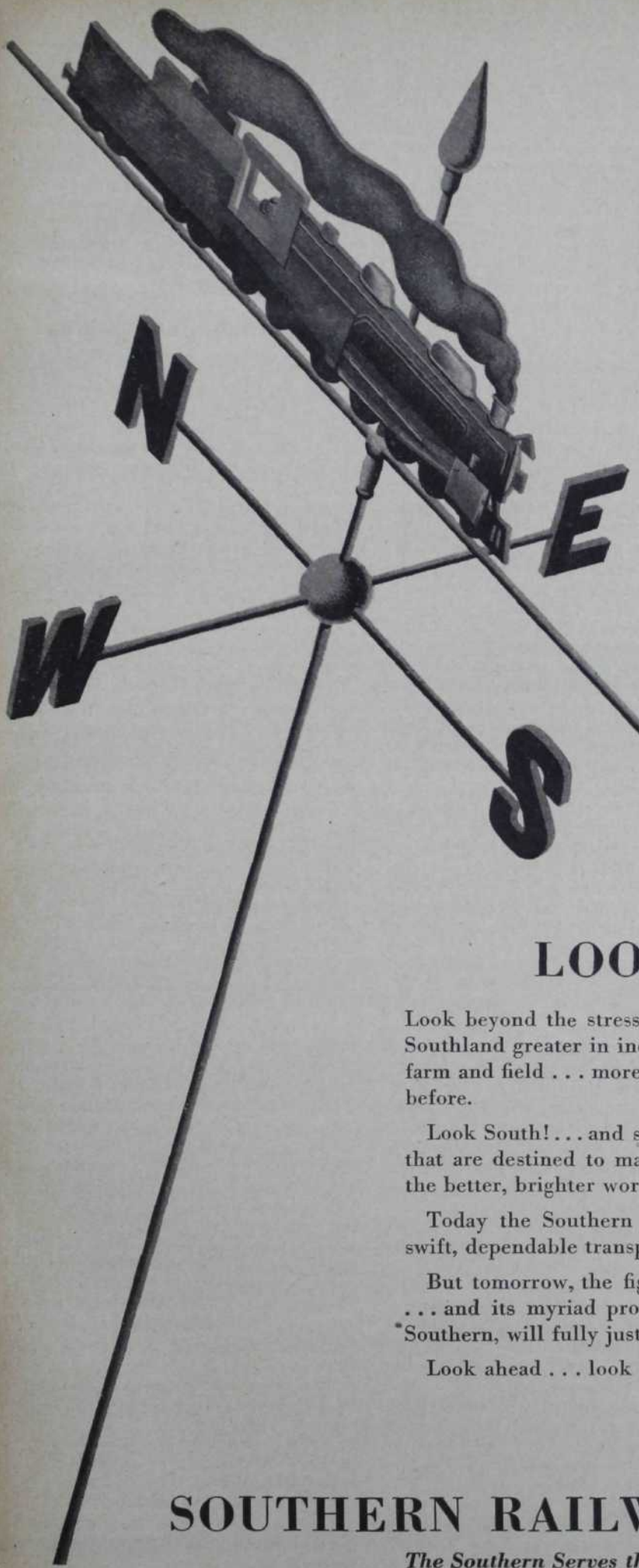
To guarantee its further existence we must formulate *now* a program for reconverting American industry from war to peace, from a controlled to a free status.

This program will be distinct from the blueprints being drawn for an idealistic world of tomorrow. It must be a practical program, which will meet the practical problems that must be solved before a normal economy may return in the United States.

In preceding issues, NATION'S BUSINESS has outlined three immediate postwar problems.

First is the settlement of accounts on the $75,000,000,000 worth of contracts expected to be in progress when the war ends. Nearly all these orders will be cancelled. Pending settlement of the accounts, much industrial capital will be frozen in work already done, materials already bought, under partially completed contracts.

Frozen funds will meet neither pay rolls nor reconversion costs. Tax rates and renegotiation practices have made it impossible for war-producing



LOOK AHEAD

Is it too early to look ahead? Too soon to dream of the bright sunshine that surely will follow the dark clouds of war?

Not to men of courage and confidence! Even now, they are busy planning the world that lies beyond America's Victory.

And to these men of Faith . . . who will be the builders of tomorrow . . . we say . . .

LOOK SOUTH!

Look beyond the stress and strain of war to the South . . . to a Southland greater in industrial might . . . richer in the fruits of farm and field . . . more exciting in new opportunities than ever before.

Look South! . . . and see mines and mills, forests and factories, that are destined to make great and enduring contributions to the better, brighter world ahead.

Today the Southern Railway System is providing adequate, swift, dependable transportation for the fighting South.

But tomorrow, the fighting South will be the growing South . . . and its myriad products of peace, speeding by rail on the Southern, will fully justify the faith of all who . . .

Look ahead . . . look South!

Ernest E. Norris
President

SOUTHERN RAILWAY SYSTEM

The Southern Serves the South



Louder than the HURRICANE

IN the old days of wooden ships and iron men, a sea captain's voice had to be louder than the hurricane, to carry over the roar of wind and waves. Today the miracle of radio flashes the spoken word around the world in a fraction of a second, but even radio must contend with problems of interference – natural and man-made static that disrupts communications. Breeze engineers have specialized in the solution of such problems for many years, have pioneered and developed Breeze Radio Ignition Shielding to guard electrical circuits against radiation or absorption of the high-frequency impulses which cause interference. Produced in a wide range of types and sizes, this equipment is designed to meet the requirements of any shielding problem, is in service today on world-wide battlefronts with our armed forces of land, sea, and air.

BREEZE MARK

Breeze

CORPORATIONS, INC., NEWARK, N. J.

industries to put aside necessary reserves against the uncertainties of the postwar period.

Yet these are the same companies that for years have been America's largest job-providers, that now employ 20,000,000 persons on war work, and are expected to provide millions of peacetime jobs as soon as the war is over.

They should be paid promptly the amounts due on terminated contracts so that reconversion to peacetime lines and peacetime jobs may proceed without interruption. The three-and-one-half-year average delay in such settlements following World War I must not be repeated.

The second problem outlined is that of disposing of the $50,000,000,000 worth of surplus products which will be in government hands when the war ends. The third concerns the disposition of many billions of dollars' worth of production facilities and real estate to which the Government owns title—an investment that has made government the biggest industrial owner in America.

These vast properties and inventories must be disposed of with the least possible interference with private business—and private jobs.

The proper disposition of government-owned plants will not enable government to compete with private industry and business, nor will it place any group of private individuals in a preferred position through the purchase of modern, up-to-date plants at a mere pittance or a minor per cent of the dollar value of the properties.

There are two other vital points to be considered in the postwar program. I deem them vital steps, which should be taken now. First, a revision of the current renegotiation procedure. Second, amendment of the tax law to enable business and industry to set up fair and sound reserves with which they may finance reconversion to peacetime pursuits.

The handling of contracts which truly require renegotiation could be expedited and a vast amount of work avoided if contracts to be renegotiated were defined as contracts completed by an institution whose net profits, after corporate taxes, were in excess of the profits made by the institution in a given prewar year established as a fair criterion.

As I have pointed out earlier, the present tax law does not allow business and industry to set aside reserves adequate to meet the probable cost of transformation to peacetime production.

An amendment should provide for reconversion reserves. It should provide further that these reserves could be used only to meet clearly defined, fair readjustment costs within, say, two years after hostilities cease.

If not used for this purpose these funds would revert to taxation at the rate existing at the time they were set aside, and thus government and the people would lose nothing.

These immediate and postwar problems cannot be left to the uncertain policies of political executive administration. The injustice and impotency of such a procedure was demonstrated clearly after the first World War. While the war was on and production was critically necessary, government officials acted to stimulate it. When the war ended, there was a complete change in attitude.

Administration officials were converted from stimulators of production to compromisers of claims. They tried to settle at any price they could force upon the contractor. This policy resulted in a general overall settlement amounting to approximately 13½ cents on the dollars of claims made.

Avoid misunderstanding

IF the solution of these problems, even though well planned before the cessation of hostilities, is left to administration officials without definition of law, then, in my opinion, we will find ourselves floundering in a sea of misunderstanding.

This would result in delays which would defeat the objective of reconverting ourselves to peacetime operations and the fullest possible employment, on time, and in a way that will again build a satisfied people.

A properly selected committee of the Congress should meet with representatives of the executive branch of the Government to hear the expert testimony of business executives best qualified to discuss these problems and their solutions.

Together, these conferees should work out the plans and principles necessary for the handling of these problems so as to sustain private enterprise so that it may serve the millions of people who function in it, and thereby serve all the people and their government. There should be no politics in this process.

When the Congress has heard the representatives of business and industry directly involved in postwar problems, the solutions should be enacted into law.

Unless we enable private enterprise to meet postwar problems successfully, we can hardly hope that business and industry will be able to provide the employment our citizens require if we are to keep government from ever again assuming a paternalistic and philanthropic role. The provisions we make now will define the course we follow after this war. One course leads to regimentation and statism, the other leads to the restoration and preservation of the American system of free men.

I ask both labor and capital to recognize now that if the American business system fails and the control of the individual is taken over by the Government, each loses all its rights and gains, and none will be other than serfs of the state.

Thus the choice now is as vital to labor and its leaders as to management and capital. Their interests are identical. Their opportunities and destiny are interwoven and cannot be separated. They depend upon each other. United they stand. Divided they fall.

I believe every American will choose the course of self-reliance and individual freedom.

3 IMPORTANT SERVICES for Burroughs users

INFORMATION SERVICE

There is an up-to-date reference library in each Burroughs office. It contains the latest detailed information on the application of machines to today's new accounting problems. This information, as well as the services of Burroughs' technical staff, is available to every Burroughs user.



MAINTENANCE SERVICE

Right now you can arrange for regular, periodic inspection, lubrication and adjustment of your Burroughs machines, to safeguard your office from emergency repairs and the delays they entail. A standard Burroughs Service Agreement provides this efficient protection at a moderate, predetermined cost. All work is guaranteed by Burroughs.



SUPPLY SERVICE

You can also arrange for delivery of Burroughs carbon paper, roll paper, ribbons and other machine supplies manufactured to Burroughs' own specifications. Discounts range from 10% to 40% on quantity purchases under different plans that permit delivery of as little or as much as you need at any one time.



These services, valuable at any time, are especially valuable in wartime. Call the local Burroughs office or write Burroughs Adding Machine Company, Detroit.

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ADDING, CALCULATING, ACCOUNTING, BILLING, PAYROLL AND STATISTICAL MACHINES
NATIONWIDE MAINTENANCE SERVICE · OFFICE MACHINE SUPPLIES

MANUFACTURING FOR WAR

The manufacture of aircraft equipment for the Army Air Forces, and the manufacture of Burroughs figuring and accounting equipment for the Army, Navy, U. S. Government and the nation's many war activities, are the vital tasks assigned to Burroughs in the Victory Program.



"How Good I Feel"

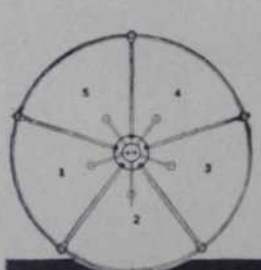
"A Shower Before Leaving the Plant Sets Me Up For Next Day's Work"

Dirt, sweat and that tired feeling all roll off like water off a duck's back — shower baths keep employees fit for steady every day work.

Bradley Multi-Stall Showers are the shower counterpart of Bradley Group Washfountains, being offered in 5-stall units that reduce piping and piping connections by 80%. Only one set of supply lines is needed for a 5-stall Bradley as against 5 sets of supply lines for five conventional single-stall showers. They come partially assembled for quick installation and save steel because partitions are of moisture-resistant pressed wood.

Among thousands in use, a few recent installations include — 58 (290 stalls) for Aluminum Co., 19 for Lukens Steel, 23 more for Cleveland Graphite, 9 for Wright, 9 for Ridgewood Steel, 25 for Fort Schuyler, 12 for Fort Slocum, 27 for Twin City Ordnance, 5 for Thompson Products, and 2 for U. S. S. Black Hawk. Bradleys will pay you dividends in improved employee health, efficiency and morale.

BRADLEY multi-stall showers





Write today for catalog 4010 ...
BRADLEY WASHFOUNTAIN CO.
2205 W. Michigan Street
Milwaukee, Wis.



What Are You Good For?

(Continued from page 26)

your performance on that particular test by about ten per cent. But, if you were given a different dexterity test, you would revert to your old score.

If you are subjective that's what you remain all your life. You can pretend to be objective—go around slapping people on the back and being the life of the party. But you are still subjective, and the pretense has done you harm. If you lack the musical aptitudes, "tonal memory" and "pitch discrimination," no amount of musical training will give them to you.

There's nothing much you can do about aptitudes, except the all-important thing of finding out which ones you have and what they are good for. Each aptitude is suited to some particular field of work. But all jobs, save those of the simplest manual nature, require more than one aptitude. Each kind of work has its pattern of aptitudes. And that pattern not only should include the needed aptitudes but should lack those that are not needed. High structure is a handicap to a lawyer; high creative imagination a drawback to an executive. A person dominated by imagination turns perpetually to some fresh course and rarely follows any enterprise through. The successful executive, O'Connor finds, seems to possess an ability, not yet measurable, of holding inexorably to a certain distant goal.

Since nine out of ten persons score above the average in at least four aptitudes, practically every man, woman and child should be able to find the field of activity to which his pattern is best fitted.

There's no advantage in having an unusually large number of aptitudes. Four or five, even if they are only a little above average, are plenty—if they are played right.

One cause of failure

AN unused aptitude, according to O'Connor, can do much harm. In particular, if a man with creative imagination is in a job that doesn't use it, he's likely to feel a nagging uneasiness and dissatisfaction, may even fail at the job for which he has the needed aptitudes because he has the additional one that isn't used.

In that respect O'Connor hopes that good may come out of the war. A nation that organizes to collect its metal scrap may be persuaded to do something about its far greater volume of human scrap. And every one of us contains some utilizable scrap.

Occasionally he finds an unexpected nugget. There was the rather crushed man who had been a grocery clerk for 20 years—had never, until the war, aspired above the vegetable counter. Both he and the Laboratory were delighted when his pattern was worked out. It was an unusual one, a combination that occurs about once in 2,000 times. It fitted exactly the requirements of a high precision lens grinder, a job for which there is an urgent demand in this war.

Far too many men, according to O'Connor, have hurried into the first war jobs they could find. A man, not of draft age or physique, who has a congenial job, even though it is not directly connected with the war, usually does the country little good by taking a war job for which he has the wrong pattern.

Executive changes mind

RECENTLY the president and owner of a well-known sales organization came to the Laboratory for a test. His business had nothing directly to do with the war and he had decided to leave for the duration. He had been offered two war jobs —one as manufacturing executive in airplane production, the other as a public relations man in Washington. The latter was his natural choice but he felt that building planes to bomb the enemy was a much more direct means of helping to win the war. He had about decided to take the manufacturing job, even though he disliked the thought of it.

The Laboratory's report caused him to change his mind, proved that, in manufacturing, he'd just be in the way.

O'Connor does not urge people to change their jobs indiscriminately. Only when the pattern is obvious, in the light of follow-ups made in thousands of cases, does the Laboratory give positive vocational advice. The main thing is to show a person the aptitudes he has and let him make his own decision. And the chances are that a man can get more than he is getting out of the job he is in if he knows his aptitudes and makes a judicious use of them.

Employers have made extensive use of the Laboratory, sending groups of their employees to be tested. That practice has increased greatly during the war. Today employers can no longer find new men to take the places of the ones they'd like to fire. Often the best answer is to find the job that the inefficient man can do better.

Sometimes it is better to promote an employee than to fire him. A manufacturer of machine tools was about to discharge a clerk in his bookkeeping department. The man had gone sour on his job, was no longer earning his keep. Before letting him go the employer, on a hunch, sent him to the Laboratory.

The man scored high in accounting aptitude, plenty high enough to make a first-rate bookkeeper. But he also scored high in structure. The unused aptitude had festered in him. On the Laboratory's advice he was promoted to a much better-paying job—in the cost accounting department. This brought him in direct contact with the tools; he could see them and feel them in the course of the day's



A BLUEPRINT FOR BUILDING "BETTER MEN"

Pullman-Standard is building many products—vast quantities of armament—vehicles of transportation—and the greatest of these is "Men"!

IT IS A THRILLING THING *to build good products. It is another and vastly more stirring experience to point to* Men *who have forged ahead, and say, "These are our finest handiwork!" For, let any one of this Company's workers demonstrate ability and ambition to better himself, there is opened to him the priceless "know-how" and experience of his immediate superior.*

★ ★ ★

On that wholesome man-to-man basis is built Pullman-Standard's continuing training program for the molding of men. For twenty years the Company has sponsored an employe "suggestion" plan which pays well for suggestions adopted—another avenue through which employes can display initiative.

The Company's policy, wherever possible, is to promote from within. Classes are organized periodically for Leaders, Supervisors, Foremen and others who can qualify. These classes are addressed, from time to time, by members of the Company's management who, in turn, attend them to listen and learn when *they* feel the need of a "refresher course".

Inevitable result of that plan for building better men is a deep clan spirit, and a loyalty to the Company that permeates through even the families of Pullman-Standard workers. Get ahead?—Why, the best place of all, they'll tell you, is right at the Plant. This system of training men for responsible positions enables this expanded management group to handle many times the load carried in 1940!

From the titanic laboratory of America's war production have emerged amazing discoveries and developments—and of them all the greatest is the very spirit of the men who achieved them! Men in high places of authority down to trainees, who have discovered what a thrill it is to find "it can be done—or—done *better*". Men intolerant of methods that have crystallized into rigid custom. Men aflame with zeal for the limitless possibilities of every job. Men whose passion for Freedom and for every man's right to win a high place by his own intelligent effort has flame-tempered them to new and inspiring capacity for doing!

★ ★ ★

TO THE SERVICE OF TRANSPORTATION *in the stirring days to come, Pullman-Standard will bring many new and better methods, better techniques—and better men! Men who have been tested and proved in the laboratory of war production! Builders of railroad cars who have become builders of ships, tanks, aircraft assemblies, howitzer and rifle carriages, anti-aircraft gun weldments, trench mortars, shells and bombs! Men unafraid of the unknown and its problems, because they have already tackled them—and mastered them!*

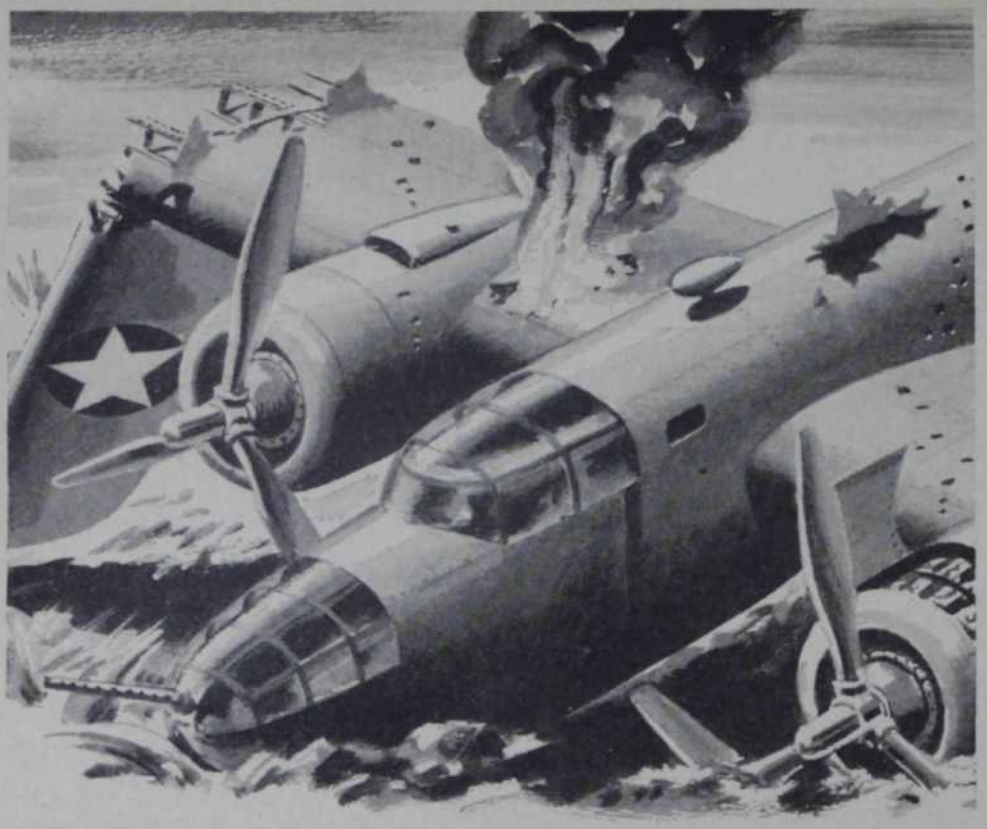


BUYING MORE WAR BONDS AND STAMPS
Backs Up the Men Who Man the Guns

PULLMAN-STANDARD CAR MANUFACTURING COMPANY

Chicago, Illinois . . . Offices in seven cities . . . Manufacturing plants in six cities

© 1943, P. S. C. M. CO.



Because of "Sabotage" in Your Shipping Room?

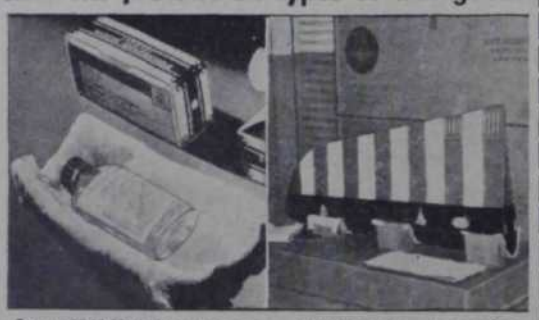
When the Stukas come over, the lack of one small repair part could keep a war plane grounded—could be the cause of a costly fighter plane being blitzed on its own air field without a chance to fight. Vital plane parts can be smashed in shipment—sabotaged by Defective Packing.

Destroy that sneaking saboteur, Defective Packing! Keep him *out* of your shipping room by standardizing *now* on safe, effective KIMPAK* for all packing protection. Whatever you manufacture, the wide variety of KIMPAK types provides *exactly* the combination of softness, resiliency, surface protection and moisture *resistance* or moisture *absorption* which your particular packing problem demands. KIMPAK is a versatile material. It protects against breakage, chipping, scratching, "burns", water damage, liquid leakage and other shipping hazards. And in all its forms, it is *always* clean, non-corrosive and 100% free of abrasive foreign material.

Whether you produce the tiniest test tubes or the toughest tank parts, it will profit you to find out more about the extraordinary economy and safety of KIMPAK protection. There's no obligation – mail the coupon today.

PACK WITH
Kimpak
CREPED WADDING

KIMPAK protects all types of war goods



Some KIMPAK types can absorb 16 times their weight in moisture.

KIMPAK provides shipping protection for delicate plane parts.

*KIMPAK (trade mark) means Kimberly-Clark Wadding



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Send more information on packing with KIMPAK for safety and economy.

Name

Company

Address

City *State*

work. He was a success in the new job.

On the other hand, a good man is often spoiled by promotion. That is most likely to happen when a good mechanic with a subjective personality is made foreman. He doesn't get on with the men, there are endless complaints against his rulings.

Tests in any business organization reveal many misfits. Recently the Laboratory found six bank tellers who ranked high in structure—an aptitude they certainly didn't need. For a try-out period, the bank agreed to pay the difference between what the men could earn as machine operators in a manufacturing house and what they earned at the bank. In six months they were earning more at their new jobs than they had at the bank.

Work for women

WOMEN average high in finger dexterity. That aptitude, like the others, may be a nagging cause of discontent if it is not used. One can take it out in knitting, but a vital young thing is not likely to do that. For her a factory job may be the perfect answer.

But there is better work than that for women. The war is proving that there are few jobs, if any, that a woman cannot do as well as a man—if she has the right aptitude pattern and works to acquire the necessary knowledge and skill.

It is an unexplained but proved fact, according to O'Connor, that structural visualization descends from father to daughter, not from father to son. A Boston man owned and operated a small shoe factory. He had two children, a boy and a girl. He took the boy into the factory for training as his assistant and successor. But the boy got in late and left early—was not very bright while he was there.

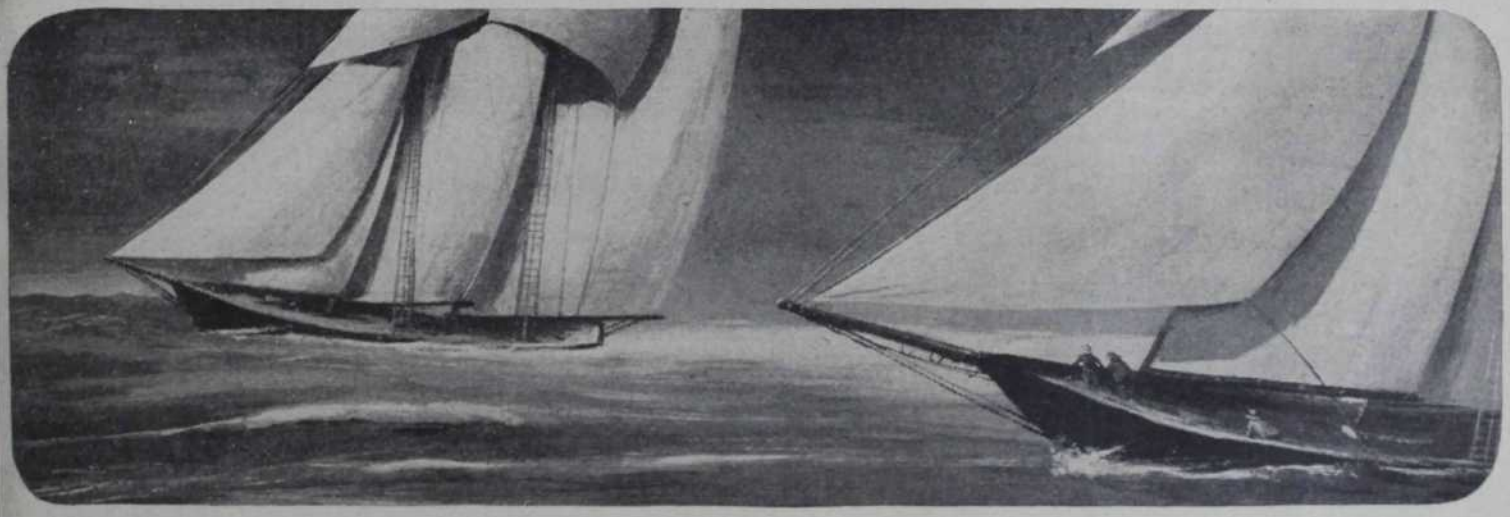
When the war came, the boy was one of the first in his set to get into the Army. The girl, too, was fired with patriotism. She took the tests at the Laboratory. Her score in structure was far above average. It was explained to her what that aptitude was, how it fitted into manufacturing. She asked her father for a job. Presently she was his assistant, doing much better than her brother had. Now the father, too, has gone to war and the girl runs the factory—very competently.

As cases multiply and findings increase, certain implications of the early tests take on sharp significance. There appears to be, in the experience of the Human Engineering Laboratory, no such thing as characteristic racial aptitudes. There will be greater variation among individuals who are Negroes than there will be between Negroes and whites. So far as O'Connor has been able to make out, there are no aptitudes belonging predominantly to any racial group.

Many men who are about to be drafted come to the Laboratory to be tested. They want to find out where they will fit among the thousand different kinds of specialist jobs in the Army and Navy.

Structural visualization is a most

WHO'LL BE HOME RUN KING THIS SEASON?



IT USED TO BE for glory and bonus money that skippers would crack on all canvas, burying the rail in the race to port from the Grand Banks.

But now the race is for more than glory. Every boat that makes the home run is a winner. Every catch is vital to the well-being of the fighting forces and home front.

And so wherever their nets will yield a prize—icy shoal, river's edge, pounding surf, placid bayou—fishermen ceaselessly toil.

Helping them to get the utmost from the catch is a substance as old and familiar as their nets . . . *salt!*

Some fish are so delicate they must be salted down immediately when taken aboard. Other prize catches are kept glistening and wholesome and clean in holding tanks of brine at the packing plants while awaiting the run through the production lines.

Even your canned salmon, shrimp, lobster, crab and chowders are more delicious today thanks to modern salting methods. Packers now use Sterling Salt *tablets* to add perfect, uniform flavoring to each separate can!

More than ever before, industry values the special grades of salt and unique salt processes developed by International. They save man-hours and money. They improve production. International Salt Company, Inc., Scranton, Pa., and New York, N. Y. Salt for every use—industry, agriculture, the home.

FREE TO WAR INDUSTRIES

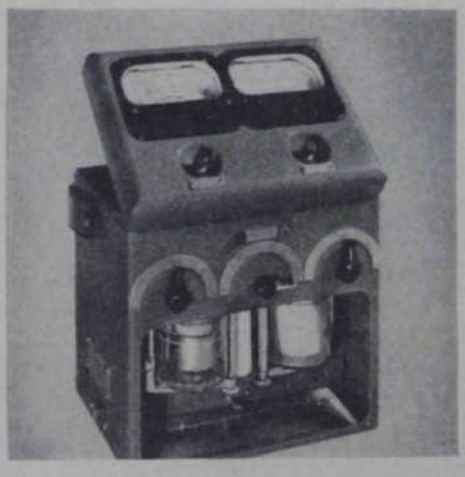
To Help Increase Wartime Production, Cities Service Offers All Essential Industries A Free Industrial Heat Prover Test!

This test helps to solve combustion problems, reveals how fuel can be conserved, and the quantity and quality of the product increased.

Today, a vast majority of our industrial plants still are without any means of maintaining *accurate* combustion control.

It is to these plants that Cities Service Oil Companies now offer, *without charge or obligation*, a complete combustion control test with the unique, new Cities Service Industrial Heat Prover. This service is available on request in most of the important industrial cities East of the Rocky Mountains.

The Cities Service Industrial Heat Prover has been throughly tested on practically every type of combustion equipment in this country and with every kind of fuel.



THE CITIES SERVICE INDUSTRIAL HEAT PROVER—a new, accurate combustion analysis instrument—developed by the Cities Service Research Division to enable those engaged in the oxygen control of furnace atmospheres to achieve greater combustion efficiency at less cost.

It has been adopted by users of steam power plants, open hearth furnaces, cement kilns, heat-treating apparatus, crucible furnaces and internal combustion engines.

Accurate combustion analysis made as a result of the Cities Service Industrial Heat Prover tests have resulted in considerable savings in fuel costs, have reduced repairs and replacements on furnace linings, crucibles and refractories due to flame corrosion . . . and have led to increased production of better and more uniform products.

Wire or phone your nearest Cities Service office or mail the coupon today—for a Cities Service Industrial Heat Prover test in your plant.

A member of the Cities Service engineering staff will then visit your plant at your convenience and make a Heat Prover analysis of your combustion processes. This engineer has been carefully trained for the purpose, and has at his command extensive information gathered by the Cities Service Research Division from power, metallurgical and chemical fields.

CITIES SERVICE OIL COMPANY
Room 1633, Sixty Wall Tower,
New York 5, N. Y.

Please arrange a Cities Service Industrial Heat Prover test for my plant. I understand there is no charge or obligation for this service.

Name

Title

Company

Address

OIL IS AMMUNITION—USE IT WISELY!

CITIES SERVICE OIL COMPANY
NEW YORK · CHICAGO

IN THE SOUTH
ARKANSAS FUEL OIL COMPANY
SHREVEPORT, LA.

valuable commodity in this war. It is definitely a wiggly block war. Structure is needed in handling all the complicated weapons of today. Pilots especially must have it. If the pilot has, in addition, inductive reasoning and creative imagination, he can probably be most useful in teaching others to fly.

Where do you belong in the Army if you are a musician? There seem to be few bands in this war. But there are other uses for the particular pattern of the musician. Aerial photography, for example. For some unexplained reason the musical aptitudes, tonal memory and pitch discrimination, seem to fit exactly the requirements of a photographer. Structure, on the other hand, is a handicap. But the interpretation of aerial photographs requires structure above all other aptitudes.

Many selectees who have been tested take the reports along and turn them over to the personnel officers.

For many men in the services, the war is a set-back to their careers. For others it is a release. They will come out not content to go back to what they did before. They have found themselves and will not be satisfied until they can reshape their lives in accordance with what they are.

Early testing pays

THE earlier a person knows his pattern of aptitudes the more likely he is to acquire the particular body of knowledge that goes with it and to find the field of activity into which it fits.

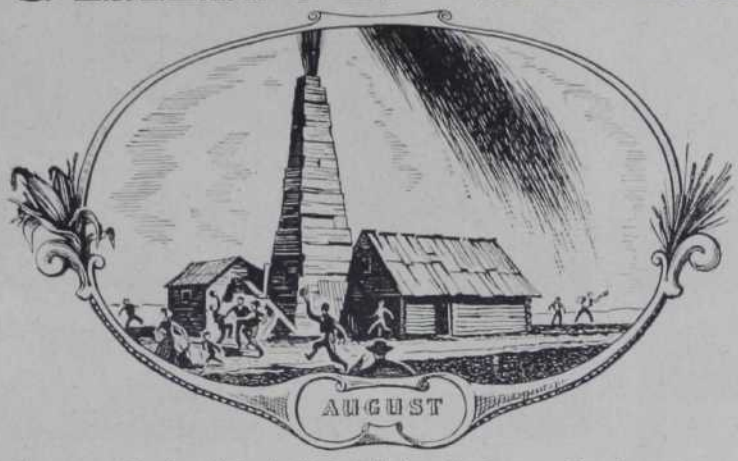
The Laboratory encourages parents to bring their children to be tested. Some parents are advising their children to postpone thinking about their future careers until after the war. O'Connor thinks that a great mistake. A boy of 16 may or may not get into the war. But whether he does or not he should know his aptitudes and the work for which they fit him.

O'Connor gave the tests to his own son when the boy was 11. He ranked exceptionally high in structure, so O'Connor set about to encourage him toward engineering. Particularly he provided him with a good library. Today young O'Connor is in charge of tool design for a large aircraft concern and has 600 men working under him.

Of course success in any field involves more than aptitudes. At least as essential are knowledge and skill—the qualities which can be acquired as against the aptitudes which cannot. A boy entering medical school may have tweezer dexterity, structural visualization, subjectivity—exactly the right pattern for a surgeon. But he will get nowhere in his profession unless he drives himself to learn its vast accumulation of facts and theory, unless he works to translate his dexterity into the specific manual skills of the surgeon.

O'Connor's formula for success is: Find out early in life what is your pattern of aptitudes and where it fits. Then work unremittingly to acquire the particular body of knowledge and skill that goes with that pattern.

INSURANCE ALMANAC



On August 27, 1859, the first successful oil well in the United States was driven at Titusville, Pennsylvania. In the same year, gold was discovered in Colorado, and in Nevada's famous Comstock Lode. So much new wealth stimulated industry, speculation, spending and forced prices up. Fire insurance rates, however, resisted the trend... stayed low. At the present time, as a result of consistent effort by the Fire Association Group and other leading companies to reduce costs by reducing hazards, rates are at an all-time low.

1943—AUGUST *hath 31 days* *"Build on foundations of principle—not expediency!"*

ASTRONOMICAL CALCULATIONS

EASTERN STANDARD TIME

AUGUST	LATITUDE +30°		LATITUDE +35°	
	SUNRISE	SUNSET	SUNRISE	SUNSET
1	5:18	6:54	5:08	7:03
6	5:21	6:50	5:12	6:59
11	5:24	6:46	5:16	6:54
16	5:27	6:41	5:20	6:49
21	5:30	6:36	5:24	6:43
26	5:33	6:31	5:27	6:37
31	5:35	6:25	5:31	6:30

AUGUST	LATITUDE +40°		LATITUDE +45°	
	SUNRISE	SUNSET	SUNRISE	SUNSET
1	4:57	7:15	4:44	7:28
6	5:02	7:10	4:49	7:21
11	5:07	7:04	4:55	7:14
16	5:11	6:58	5:01	7:06
21	5:16	6:51	5:07	6:58
26	5:21	6:43	5:13	6:50
31	5:26	6:35	5:19	6:41

AUGUST	LATITUDE +30°		LATITUDE +40°	
	MOON-RISE	MOON-SET	MOON-RISE	MOON-SET
1	5:37	7:20	5:18	7:37
3	7:22	8:32	7:10	8:42
5	9:08	9:39	9:05	9:40
7	10:58	10:48	11:04	10:40
9	12:54		1:10	11:51
11	2:58	12:56	3:21	12:35
13	5:01	2:50	5:23	2:26
15	6:49	5:03	7:05	4:45
17	8:19	7:21	8:24	7:12
19	9:38	9:30	9:33	9:33
21	10:56	11:30	10:42	11:43
23		1:23	11:59	1:44
25	1:05	3:07	12:41	3:30
27	2:42	4:39	2:19	4:59
29	4:25	5:58	4:08	6:13
31	6:11	7:08	6:02	7:15

To obtain local times of sunrise and sunset: for longitudes other than the standard time meridians (i.e., 75°, 90°, 105°, 120°, for Eastern, Central, Mountain, Pacific Standard Time), decrease time four minutes for each degree east of standard meridian, or increase time four minutes for each degree west of standard meridian.

1—Su.—1796, Friendship Engine Co. organized; joined Fire Association later.
2—M.—1920, League of Nations adopted International Court of Justice.
3—Tu.—1923, Coolidge inaugurated President after Harding's death.
4—W.—*In wartime, have your Agent or Broker check your property insurance every 6 months.*
5—Th.—1858, Atlantic telegraph cable completed.
6—Fr.—1805, Neptune Hose Co., Fire Association affiliate, organized.
7—Sa.—1789, U.S. War and Navy Depts. established.
8—Su.—☽ *First Quarter, 10:36 P.M., E.S.T.* 1607, first settlers landed in Maine
9—M.—1844, G.W. Toland elected 1st Pres. Reliance Ins. Co. at $1000 annually
10—Tu.—1846, Smithsonian Institution est'd at Washington, D.C.
11—W.—*Want information about the war damage insurance offered by the War Damage Corporation? See your Agent or Broker today.*
12—Th.—1782, 10,000 houses destroyed in 3-day fire in Constantinople.
13—Fr.—1868, Peru-Ecuador earthquake causes $300,000,000 property loss.
14—Sa.—1828, Fire Association rents Philadelphia office at $125 yearly.
15—Su.—☺ *Full Moon, 2:34 P.M., E.S.T.* 1914, Panama Canal opened to traffic.
16—M.—*With rates as low as they are today, it is sound business to hedge rising replacement costs by increasing the amount of your fire insurance.*
17—Tu.—1848, $3,000,000 fire at Albany, N.Y. Many uninsured property owners wiped out.
18—W.—1924, evacuation of Ruhr began. 1807, birth of Charles Francis Adams.
19—Th.—1812, naval battle between the "Constitution" and the "Guerriere".
20—Fr.—1852, steamer "Atlantic" sunk in Lake Erie collision—250 lives lost.
21—Sa.—*In a disastrous fire, inadequate insurance can be almost as crippling as none at all. Have your Agent or Broker check your coverage now.*
22—Su.—☾ *Last Quarter, 11:04 A.M., E.S.T.* 1911, Mona Lisa stolen from Louvre.
23—M.—1914, Japan declared war on Germany.
24—Tu.—1814, British burned White House and Govt. buildings.
25—W.—1885, cyclone causes $2,000,000 property loss in Savannah and Charleston.
26—Th.—1920, women get the vote.
27—Fr.—*Don't guess about the adequacy of your insurance. See your Agent or Broker.*
28—Sa.—1565, Menendez arrived at St. Augustine, Florida.
29—Su.—1935, Queen of the Belgians killed in automobile accident.
30—M.—● *New Moon, 2:59 P.M., E.S.T.* 1886, earthquake wrecks many Charleston bldgs. Fire damage heavy—few owners properly insured!
31—Tu.—1807, theological seminary at Andover organized.

OBSERVATION *for August:* Since Pearl Harbor, replacement costs have advanced sharply. So even if your property insurance was adjudged adequate two years ago, it may now be grossly inadequate.

MORAL *for August:* Let your Insurance Agent or Broker bring your insurance up to date.

PROPERTY INSURANCE
Fire - Automobile - Marine

FIRE ASSOCIATION GROUP

Fire Association of Philadelphia
The Reliance Insurance Company
PHILADELPHIA

Lumbermen's Insurance Company
Philadelphia National Insurance Company
PENNSYLVANIA

SYMBOL OF SECURITY SINCE 1817



Salt Brings Back That Will To Work

Heat-Fag is an ever-lurking enemy in every shop where toil and sweat are writing new production records. Body salt lost by sweating must be replaced or Heat-Fag sets in. Lowered vitality, fatigue, production slowdowns, accidents and absenteeism can often be laid at the door of this insidious force.

The finger of Accidents is always beckoning to the fatigued, inalert worker. That's why Heat-Fag, ever present when men sweat, takes such a heavy toll in man-hours lost.

Salt tablets restore the body salt lost through sweating. They help keep men alert . . . efficient.

In leading industrial plants, salt tablets are a "must" for men who sweat. They maintain the will to work through long, hard, hot hours.



← This Is What Happens When Sweating Robs the Body of Salt.

MORTON'S Heat-Fag SALT TABLETS

QUICK DISSOLVING
(Less than 30 seconds)



How a Morton Salt Tablet looks when magnified. Soft and porous inside, dissolves in less than 30 seconds with a drink of water.



Case of 9000, 10-grain Salt Tablets - - **$2.60**
Salt-Dextrose Tablets case of 9000 - - **$3.15**

Place MORTON'S DISPENSERS at all Drinking Fountains

They deliver salt tablets, one at a time, quickly, cleanly — without waste. Sanitary, easily filled, durable.

500 Tablet size - - - **$3.25**
1000 Tablet size - - - **$4.00**

Order from your distributor or directly from this advertisement. Write for free folder.



MORTON SALT CO., Chicago, Ill.



Workers at the Severance Tool Company take time out for religious services—find that the day's tasks go easier

Church—in the Factory

By LAWRENCE N. GALTON

FOUR times any Sunday morning—at 6:35, 7:05, 11:10 and 11:40—in a former game room of the Colt Patent Fire Arms plant in Hartford, Conn., a little church holds services for factory workers.

The din of the plant creeps in as machines spew out instruments of war, but the overalled and jumpered congregation concentrates in deep devotion. It's a short service. Two hymns, a psalm, then prayers, a two-minute talk, and the benediction. In ten minutes it's over. But talk to the workers as they file out.

"The service makes the Sunday work a little easier to face," one girl offers softly.

A male worker tells you thoughtfully: "The service gives me something to go on in the time between."

Even workers who don't attend the services, tell you:

"Somehow, I haven't gotten around to attending yet. But"—and here the speaker looks at you earnestly—"I'm glad to know that worship is taking place in the factory."

The Colt services have been held every Sunday since July, 1942. They were originated by the Rev. Charles Stinnette, Jr., young curate of Hartford's Trinity Church, to meet what he and his rector, the Rev. Raymond Cunningham, found to be a vital problem—to reach the hundreds of newcomers in the community's war plants who had not yet sought out the church, and to provide for workers on odd-hour shifts who could not attend regular services.

From the first the idea of taking the church into the factory was greeted enthusiastically. Even on the first day, 300 Catholic workers attended the two early morning masses. Attendance at the other services, held during the two noon lunch-hour periods and emphasizing things common to Christian and Hebrew alike, was smaller at first but has increased regularly.

All religious groups in Hartford are cooperating, and Colt officials consider the idea one of the best things that could have happened. Results? Intangible, yes. But the whole matter of worker morale is intangible. Vice President Dwight G. Phelps has had personal calls from 50 workers to tell him how much they appreciate the worship periods. He points to the regularity of attendance.

Believed to be the first ever originated and conducted by local clergy, the Colt services provide an answer to the tremendous problem the church has now—to find its people in wartime industrial areas, to minister to their needs and thus to help make the final victory more certain.

War has brought a greatly increased need for the solace and strength that only religion can provide. It is a need felt by men in uniform and in overalls alike. The evidence is overwhelming.

Recently Father Ryan, senior chaplain with an American Army division in North Africa, reported that American boys of all faiths—Protestant, Jew and Catholic—"show a genuine

"How Seldom-Heard-Of Services

Provided by America's Fire Insurance Companies

Guard Vital Wartime Food Supplies"

War stresses the importance of extra services that have reduced fire losses and average rates 40% . . . while your premium dollar has contributed to profits an average of only 2⅔¢!



"*Dear Consumer:* With our nation at war, I think everyone realizes the need of guarding vital food and raw materials. But not many know this: Leading insurance companies I represent maintain many voluntary services that protect vital food supplies, industries, communities and homes . . . reduce fire losses . . . and thus reduce the cost of fire insurance to you. Among these are:

ARSON INVESTIGATORS



These specially chosen experts safeguard granaries and warehouses—raw materials—homes and lives. From coast to coast, they trail and help to trap firebugs, aiding authorities in convicting an average of 400 arsonists each year.

"In 30 years, such services as these have reduced both the rate of fire loss and the average cost of fire insurance by more than 40%! Out of each premium dollar, 97⅓c on the average has been applied to the payment of policyholders' losses, taxes and other necessary costs of operation. Only 2⅔c has remained as 'profit'—to strengthen the companies' ability to pay unusually heavy losses should they occur in the future."

Respectfully,

Your Fire Insurance Agent

CAPITAL STOCK COMPANY INSURANCE — Standard of Protection

. . . representing the Leading Fire Insurance Companies who maintain the National Board of Fire Underwriters, a non-profit organization for public service in fire prevention, founded 1866.

FREE! "42 ways to keep your home from burning." Interesting guides and checklists . . . hints that might save your family's lives if fire does strike . . . ways to spot fire hazards in your job or business. FREE—ask your insurance agent—or mail coupon today!



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Please mail your FREE material on fire prevention in my ☐ Home ☐ Farm ☐ Business (Please mention kind of business _____)
Name _____
Address _____
City _____ State _____



THE FRISCO'S ON THE WAY—

Past the signal tower moves another long, loaded Frisco freight ... loaded with tons of vital military supplies and essential industrial and civilian goods. Frisco is utilizing to the fullest extent its equipment and manpower in America's march toward Victory. And, in this "war of transportation" the Frisco's part is especially important, as its rails provide the vital connecting link for transcontinental routes—Coast-to-Coast and Border-to-Border.



ONE OF AMERICA'S RAILROADS
—ALL UNITED FOR VICTORY

interest in things spiritual. You notice the dead seriousness of the men as they approach a showdown. War crystallizes and matures their ideas about their relation to their God."

Industry itself has become aware of the need for doing something about religious guidance for its workers and in a few instances has made its own provisions to see that they get it.

Douglas Aircraft in Santa Monica, Calif., for example, began even before Pearl Harbor to employ in its welfare department the Rev. Peter F. Wall, pastor of the local community church, who visits employees in sickness and in domestic and financial trouble and offers spiritual help whenever advisable.

In Hudson Falls, N. Y., the Sandy Hill Iron & Brass Works, making minesweeping equipment on a 168-hour weekly schedule, pays its workers to attend church. It has arranged its schedule so they can go to Sunday morning services on company time.

Workers lead services

THE Agerstrand Corp. of Muskegon, Mich., began services in a makeshift chapel in its plant in May, 1941, when it had only 40 employees. Now, with hundreds employed on three eight-hour shifts daily making plane and tank parts, it has a new chapel. Devotional services, sponsored by the management and led by the workers themselves, are held every morning.

The Severance Tool Co. sponsors daily devotional services in its main plant in Saginaw, Mich., and in branch plants at Chicago, Detroit, Los Angeles and Long Island City. Services are held for each of the three shifts and employees are paid for attending the 20-minute sessions of hymn singing, scripture reading and prayer. Occasionally outside clergymen are invited to speak.

Religion in the factory is full of meaning for these companies and their employees. The comment of Norman Deitz, a chemist in the Agerstrand Corp., is typical. "I believe that a ten-minute period of prayer before work helps stimulate the spirit for the entire day."

Frank Boyd of the Severance personnel department has said:

"In the atmosphere created by worship in the factory there is, in the main, harmonious employer and employee relations. Absenteeism and drunkenness are nil. Employees respond to safety instruction and do their best to keep production high."

It is likely that many other companies, too, are eager for leadership from the church. They will look to the church more and more as the need increases. And it seems destined to increase as more women go into the factories, as casualty lists grow longer, and as the strain at home increases.

Perhaps as never before the church in America has an opportunity to be of valiant service. It was a churchman, the Rev. Herbert Swanson, who, in dedicating the new chapel of the Agerstrand Corp., said: "Worship and work go together. Worship is a preparation for work and work will be done more easily after worship."

The Colt services may light the way. Already a few clergymen in other cities have heard about the services and written to Hartford seeking information.

"The Army chaplain who leads his congregation in worship under the shadow of guns while 'on the alert' should be supplemented by the civilian chaplain who leads his congregation in worship against the background of factory work where his flock is 'on the job,'" says the Rev. Mr. Stinnette.

Chaplains for the fighters in the factory! It's a provocative idea. A huge opportunity.

Politics on the Wires

A NEW brand of power is surging over REA wires nowadays. This time it is political not electrical. Differences between the recently formed National Rural Electric Co-Operative Association and the Rural Electrification Administration, that have been smouldering for months, have burst into flame, and into print, too, in an exposé published in the July 8 issue of *Public Utilities Fortnightly*.

Eight hundred sixty-eight Rural Electric Co-ops, borrowers from Uncle Sam, with 1,000,000 members and "4,000,000 votes," "would be in a position to control many congressional and several Senatorial offices," says Judson King, author of the article.

The quarrel appears to have been fanned into flames by a proposal to put the REA Co-ops into the insurance business as a first step in a program of expansion into all kinds of merchandizing.

Congress had but one object when it passed the Rural Electrification Act May 20, 1936, to supply "electric energy to persons in rural areas who are not receiving central station services." This program advanced steadily until restricted by the war's demand for materials, principally copper. Now the REA is devoting its energies to furtherance of the "public power" program, requesting money from Congress to buy out private power company lines in rural areas as well as generating stations.

"Rural areas" under the REA Act may include towns up to 1,500 population. There is a proposal in Congress to raise this limitation to towns of 10,000 population. Fifty-two per cent of the population of the United States would come within this new "rural area" proposal, and potentially within reach of Rural Co-op domination. The commendable purpose of electrifying our farms which has received the support of Congress to the extent of nearly $500,000,000 as well as general public endorsement, has sunk, or is rapidly sinking, to the level of a political football. Senator Shipstead, Minnesota, has asked a congressional investigation. —DAVID J. GUY

Light on one of your Knottiest Problems...

MANPOWER

When your office figure-work piles up . . . when there "aren't enough hours in the day" to get the job done, you don't need to be reminded you have a man-power problem!

If shortage of help is your bottleneck, if you'd like to make inexperienced help more productive, if your office staff suffers from "always behind" strain and mistakes, you may get relief by discussing your problem with a Monroe representative.

To simplify and speed up today's increasingly heavy and complicated load of figure work is a Monroe contribution to wartime efficiency.

Monroe Calculating, Adding and Accounting machines, and the expert figure services that go with them, are now more essential than ever. Upon them thousands of offices are leaning heavily to produce the unprecedented volume of work necessitated by the present emergency.

If additional Monroe equipment will enable you to do a better war job, our representative will explain how we are prepared to cooperate with you. Without obligation he will analyze your figure routine and needs, and may be able to suggest short cuts that will result in higher production in fewer man-hours.

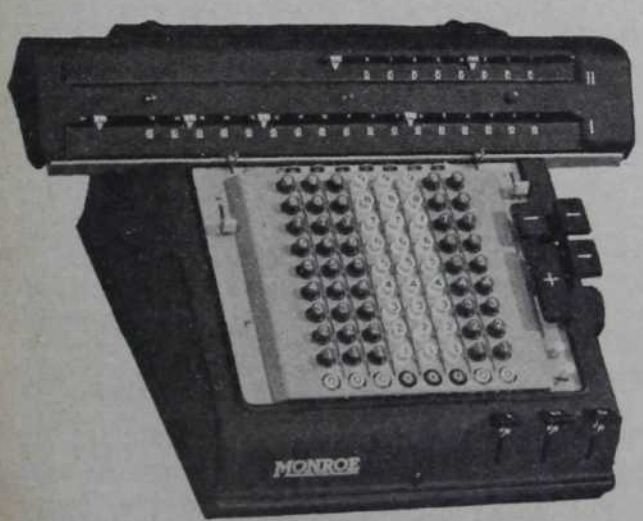
Of particular interest right now will be his explanation of the new

MONROE SIMPLIFIED PLAN FOR WITHHOLDING TAXES

Further information concerning this plan will be sent if you will fill in and mail the coupon below.

Keep your Monroe machines operating at peak efficiency through regular inspections by a trained Monroe specialist under our Guaranteed Maintenance Plan.

The nearest Monroe branch awaits a letter or telephone call from you.



MONROE

Machines for Calculating, Adding, Accounting

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Because of skill, precision and long experience in designing and manufacturing Monroe machines, our plant was selected for the development and production of intricate war equipment requiring unusual exactness and accuracy.

Monroe Calculating Machine Co., Inc., Orange, N. J.
Please send a free copy of "Monroe Simplified Plan for Withholding Taxes."

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HOW BIG

can an Air Express shipment be?



AS TO WEIGHT, your shipment may be a pound or a ton and up, so long as it fits in a plane. **AS TO SIZE,** you will be safe in following dimensions shown underneath the illustration.

However, large shipments can often be broken into a number of smaller units. When this is impossible, consult your local Railway Express Agency, who can often make special arrangements for handling larger shipments.

FOR FASTEST DELIVERY, ship early, as soon as package is ready. PACK COMPACTLY but securely, to cut AIR EXPRESS costs.

Maximum dimensions for AIR EXPRESS *packages: Length, 35 to 49½ inches; width, 44 inches; depth, 18½ inches. Break larger shipments into smaller units whenever possible.*

Air Express Speeds War Program

TODAY, AIR EXPRESS not only serves the home front but is also working hand in hand with the Army and Navy to supply our fighting fronts throughout the world.

TOMORROW, AIR EXPRESS will girdle the globe in international peacetime commerce . . . to bring *all* foreign markets to the doorstep of American business.

AIR EXPRESS
Gets there FIRST

Phone RAILWAY EXPRESS AGENCY, AIR EXPRESS DIVISION
Representing the AIRLINES of the United States

WRITE for our quick-reference handbook on "How to Ship by AIR EXPRESS During Wartime." Dept. PR-2, Railway Express Agency, 230 Park Avenue, N.Y.C.

Scrap . . .



THE "junk" man is an important, but sometimes overlooked and misunderstood, cog in the machinery of democracy

WHEN ORCHIDS are passed out to business men who play vital roles in building the greatest industrial war machine on earth, don't overlook the scrap dealers, who are turning in a war job to boast about when peace comes.

There are 15,000 scrap concerns in America, ranging from the one-man junk buyer who still cries in the suburbs and prowls the city dumps to such huge organizations as Luria Brothers & Company of Philadelphia, with offices in eight large cities and plants in six others. One organization may specialize in buying and razing wrecked ships; another may wreck homes and dilapidated buildings; while a third may buy out-of-order railroad tank cars, repairing the tanks and reselling them to industry.

The industry may be divided logically into two sections: One dealing exclusively in metals; the other dealing in these *and* other scrap products ranging from old furs and rags to rubber and bones.

The first of these divisions—about 51 per cent of the industry—is represented nationally by their trade association, the Institute of Scrap Iron & Steel, with headquarters in Washington, D. C. The others are represented by the National Association of Waste Material Dealers, with headquarters in New York City.

Although employment today is at a peak in the industry—about 200,000 persons—collection of scrap was going on in this country long before Paul Revere made his famous ride. Revere, incidentally, is regarded as the father of America's scrap industry. A coppersmith, he advertised in Boston newspapers before the Revolution that he would buy scrap copper from all comers.

The Revolution brought America's first scrap drives, when appeals went out for pewter, copper, lead and all other metals used in making war implements. The scrap industry has served well in every war since then.

However, its real growth came after the Civil War, with the development of the open hearth method of making steel. Since the Bessemer process, long the *only* means of manufacturing steel in this country, used little scrap, large amounts accumulated. This scrap pile hastened the development of open hearth furnaces, which made great use of scrap.



Official U. S. Navy photograph

THEY'RE ALL ACES TODAY

Blinding speed, armored planes and devastating firepower have eliminated the individual ace—the "knight of the air"—from modern aerial warfare. Now it is the perfect coordination in precision teamwork of *every* echelon and *every* squadron that "rings the bell" in air battle.

That is why American fighters and bombers are writing such glorious new pages in history. Americans are brought up on teamwork—in play, in business and in war. In the fire insurance industry, for example, despite the handicaps of the manpower shortage and drastically-curtailed transportation, agents are continuing to bring insurance protection to American homes and industries. And besides giving efficient service to policyholders, agents are active in civilian defense—another important form of protection.

Moreover, they are still further proving their teamwork ability by patriotically cooperating with our company in its modest contribution towards national war financing through the Ninetieth Anniversary War Loan campaign, which provides that:

All new gross premiums collected on fire and other policies that the Home writes for the balance of the year are being invested in War Loan Bonds. These purchases are OVER *and* ABOVE *the normal government bond purchases which the company is continuing to make.*

In the air or on the ground, teamwork is the American way—the short-cut to Victory!

☆ THE HOME ☆
Insurance Company
NEW YORK
FIRE ★ AUTOMOBILE ★ MARINE INSURANCE

Ninetieth Anniversary Year



WAR BUSY NORTH CAROLINA OFFERS ADDITIONAL PRODUCTION FACILITIES

NORTH CAROLINA mills and plants are humming—as management and labor, *working together in harmony and peace which characterizes the industrial life of the State*, turn out a veritable stream of the materials of war. Day and night, night and day, the pace never falters . . . ships, airplanes, uniforms, lifeboats, munitions, vital minerals, parachutes and scores upon scores of other necessary articles move in a never ending line to the far-flung battle fronts.

There remain in North Carolina, however, a limited number of available manufacturing plants, available for manufacturers having or able to procure their own machinery. To such manufacturers and to those manufacturers doing postwar planning, North Carolina offers a real opportunity . . . climate affording year-round operation, hydro-electric power, intelligent labor, and geographic location which places the least burden on the over-loaded transportation system of the nation.

Write today for information. Address Commerce and Industry Division, 3126 Dept. of Conservation and Development, Raleigh, North Carolina.

NORTH CAROLINA

and which in turn resulted in the development of scrap dealing.

In 1900, American industry used only 5,100,000 tons of scrap, including "home" scrap (reclaimed by industry itself), and "purchased" scrap (gathered by independent dealers). This tonnage increased each year to reach a high of 26,800,000 tons in 1917. It fell slowly until 1921, but rose again to 37,600,000 tons in 1929. In 1932, it was down again to 10,000,000 tons, but climbed back to 55,000,000 long tons in 1942, the greatest amount of scrap melted in any country, anywhere, any time.

Although every householder helped in this production the credit for processing the metals turned in and putting them where needed at the right time must go to the scrap dealers.

This year promises a new record.

The demand for scrap goes up or down with the demand for steel because, in making steel today, a ton of scrap is used for every ton of pig iron. From this union come the toughest steels—plates for battleships, tanks and other war implements.

Moreover, scrap represents a *surer* source of supply for the future than do our ore reserves, because iron and steel virtually *never* wear out. Scrap men point out that even rust really is usable and that the Pennsylvania Railroad, among others, regularly sells rust to dealers. For that reason no steel is lost—forever—unless it is sunk, or corrodes in places where the rust cannot be captured.

Highly technical

BUT the scrap business is more than just gathering old pieces of iron, steel, clothing or paper. It is a highly technical business. The average scrap company has to divide its intake of iron and steel, for example, into 75 grades established by the Department of Commerce. The Office of Price Administration has set ceiling prices on the most-used of these grades and dealers operate under the ever-watchful eyes of these and other government agencies.

Dealers have millions of dollars invested in plant facilities, including giant baling machines, shears, cranes, offices, real estate and capital tied up in scrap on hand. But the scrap industry does not yet—and perhaps never will—boast a company listed on the New York Stock Exchange. This is because it is still one of the most individualistic of all industries. Most scrap companies are still either partnerships or wholly owned by one individual.

Even in the largest companies—such as Luria Brothers & Company—can be found men who, at the turn of the century, were riding on a ramshackle wagon crying: "Junk man . . . junk man!"

Today, of course, many of these men ride behind chauffeurs to their offices. Several companies, too, have built elaborate plants and office buildings. Such a company is the Schiavone-Bonomo Corporation in Jersey City, N. J., where office workers labor amid modernistic surroundings and in air-conditioned comfort, but look out on a sea of scrap.

CHEVROLET TRUCKS

Serve Our Armed Forces in Many Parts of the World

That's the story of these big, rugged, Chevrolet-built military trucks —*and of many, many other kinds of Chevrolet-built war equipment* —as Chevrolet plants continue to work day and night turning out

VOLUME FOR VICTORY

CHEVROLET
DIVISION OF
GENERAL MOTORS

★ BUY ★
★ U. S. WAR BONDS ★
★ AND STAMPS ★















Just for "DUCKS!"

MAYBE this idea isn't *practical*—but don't say it isn't *possible!* Shooting ducks with an automatically aimed and fired shot gun ought to be simple when you consider what the armed forces are doing today!

We don't know that duck hunters will ever have such a sure fire gadget. But we do know that when the fighting is over there will be countless new applications of electronic devices to do the world's work and to make living pleasanter.

Whatever form these electrical applications take, they will need connectors—similar to those Cannon now makes by the thousands, for use where vital electrical circuits must be connected quickly and easily.

The Cannon Type "K" Connector was designed for use in aircraft, radio, instruments and other electrical circuits. Besides their many wartime uses, Cannon Connectors are standard in a score of industries . . . in fact, you'll find Cannon Plugs used wherever electrical circuits must be connected or disconnected with 100% dependability.



CANNON ELECTRIC

Cannon Electric Development Co., Los Angeles 31, Calif.

Canadian Factory and Engineering Office: Cannon Electric Co., Ltd., Toronto

REPRESENTATIVES IN PRINCIPAL CITIES — CONSULT YOUR LOCAL TELEPHONE BOOK

Man vs. State

(Continued from page 24)

mediocre. Progress comes from diversity, difference, trial, error, and above all, competition. We owe all that we possess to these hard virtues, all of which are repudiated by the planners.

It is now proposed that my individualism shall not only be submerged in my British citizenship, but shall be obliterated, for the purpose of a world plan, a perfect universal scheme of things.

It is suggested that I shall act in the most economical way in accordance with the principles of the brotherhood of man and that my soul and character will make me a good miner or tailor or publisher, so that the Mexican, the Russian or the Armenian may also have his full share of the good things of life.

We are, in a sentence, to substitute for the enormous constructive natural power of the self-interest of each of us, a manufactured force composed of the theoretical interests of all. To the individualist this adds up to nonsense.

State is the war maker

ONE other thought on the subject of the State and the Man: The State alone can wage war; the individual yearns for peace and is, of course, incapable of making war. From this it follows that every addition to the functions, the interests, the powers or the resources of the State, adds inevitably to the reasons for, and consequently the possibilities of, war.

The mission of the Society of Individualists is to say quite simply that all human advancement has hitherto come along the road called Individualism, that none of it has ever been politically planned, and that we, therefore, beg our people before accepting the authority of those who offer nothing but words, to examine with more care the recorded results of past deeds.

Our task is not easy, the battle will be hard. We have against us the strongly entrenched vested interests of officialdom; we have to face armies of Socialists who in flagrant defiance of the party truce have not scrupled to declare to the nation and to the world that we are fighting for their nostrums. In addition, we have to deal with large numbers of well-meaning people from Archbishops downwards who, selecting specious little items from the catalogue of the planners, all of which can be found in Hitler's *Mein Kampf*, fail to understand that those little bits are portions of a well-designed whole and cannot in practice be separated from the complete totalitarian structure.

That is why we have called upon all men and women of good will and some measure of understanding of practical affairs to join our ranks, boldly to proclaim themselves Individualists, and do their utmost to avert the collapse and calamity which lurk in the wake of collectivism.



Mosquito Bomb

POWERFUL new device filled with new insecticide helps our soldiers wipe out death-dealing mosquitoes in the tropics

IF THE JAPS had not taken over 90 per cent of the source of quinine, the "mosquito bomb" might not have been devised. But the American armed forces, deprived of this source of antimalaria drug, need it now more than ever. They are fighting in the worst malaria infested islands of the world. Col. Paul F. Russel states that 300,000,000 persons are affected with malaria all the time. Three million of these will die of the disease before the year's end.

In Burma, New Guinea and the Solomons, our fighting forces have to pour oil on the stagnant pools to prevent the mosquito larvae from developing. They must wear nets over their faces and sleep under mosquito nets. When in actual combat, our soldiers are constantly exposed to the mosquito. Malaria causes more disability among our troops than Jap bullets.

The soldiers must take quinine constantly, and the medical corps has been able, by calling in all the unused quinine in our drug stores and by pushing production of synthetic substitutes to the limit, to meet the emergency. These drugs stop the chills and fever. Use of mosquito nets and pouring oil on stagnant pools helps some. But the soldiers still need some device to kill the mosquito before he bites.

The Medical Corps set itself to solving this problem. They called in experts. Dr. Lyle D. Goodhue, U. S. Department of Agriculture chemist, found that a substance from the flowers of pyrethrum, combined with the oil of sesame, kills mosquitoes, but is harmless to man.

A Westinghouse refrigerating engineer adapted a container used in refrigerator manufacture to the new use. The insecticide, combined with Freon gas, was pumped, under high pressure, into the containers. At the top edge is a capillary tube which acts as seal and outlet.

To use the mosquito bomb, the operator grasps the container in one hand, presses the trigger, and shoots the gaseous insecticide out in a fine spray with the penetrating power of a bullet. So effective is this insecticide that the operator need not hit the mosquito directly. It hunts him out and kills him, even though he may be concealed in clothing or in a crack. —ALBERT F. TYLER.



"Your father fought a second war too, Son..."

"... and he became an engineer because he saw his service in our Navy as a *beginning*—an opportunity to *learn*—and went on from there. That's *your* second war, too, John...

A lot of mothers lose all hope when sons go off to war. Because of dangers they'll face, and because they seem to be leaving their futures behind them—their jobs, their schools, their girls...

But war is more than using a gun. War today requires *every* kind of skill—even more than it did when Dad went in. You've got to see that, Son, as your *opportunity.* Not only to help win this war faster—as a radio expert or a pilot or a navigator—but to build for the *future,* too!

I know it won't be easy. Our Navy has plenty for every officer and man to do. Those who want to progress and learn just have to manage to handle a little more! Your father did it—and you're his son! Dad always said the Navy was the finest school he ever went to.

I'm not happy to see you go, John. But I *am* glad I've got you to send—to fight for your country, for mothers over all the world, and for your own future as a free citizen in a free world. Dad would have been proud of you today, Son. *Deserve* his pride—do *more* than you think you can, and your Navy and your country will reward you through the months and years ahead."

JOHN A. ROEBLING'S SONS COMPANY
TRENTON, NEW JERSEY Branches and Warehouses in Principal Cities

JAR ROEBLING

PACEMAKER IN WIRE PRODUCTS

Just a Kid with a penny to spend



It seems like no time at all since Joe Smith was just one of the neighborhood kids. He'd go into the drug store and make "Pop" Martin describe everything in the candy case before he'd spend his penny—



But look what a few years will do. Joe's in the Navy now, facing the biggest job of his young life, while "Pop" Martin, the druggist, carries on his needed work in the same fine store.

Serving thousands of American merchants—and their millions of customers—are Ohmer Cash Registers, many of them purchased ten years or more ago. Today, all of the skills and resources formerly used in the manufacture of Ohmer Registers, are hard at work for Victory. Meanwhile, in stores of all kinds all over America, Ohmer Registers are providing the reliable, dependable service for which they have long been famous. The way they're serving now is the strongest proof of their efficiency, performance and value. Ohmer Register Co., Dayton 1, Ohio.

OHMER

CASH REGISTERS for every type of retail store
FARE REGISTERS and TAXIMETERS for transportation
TOOL CONTROL REGISTER SYSTEMS for industry

Washington War Survey

From the Records of the U. S. Chamber's War Service Division

Industrial Accidents—Labor Department reports job accidents in United States, from July, 1940, to January, 1943, killed 48,500 workers; 258,000 lost an eye, finger, hand, arm or leg; 5,300,000 were laid up for average of three weeks each. Days of work lost totaled 110,000,000 or more than 375,000 man-years.

* * *

Savings in Critical Materials—Office of War Information reports that by simplification, and curtailments in consumer and industrial items, these savings have been effected: 600,000 tons steel, 17,000 tons copper, 35,000 pounds solder, 180,000,000 yards cloth, 277,000 tons pulp, 450,000,000 board feet lumber, and 8,000 pounds tungsten.

* * *

Farm Machinery and Equipment Available—WPB chairman announces substantially increased production program for farm machinery, beginning July 1 • War Food Administration authorizes manufacturers to distribute 100 per cent of authorized production of milking machines, cream separators and milk coolers • WPB announces program to make softwood lumber available to farmers and retail lumber dealers for essential agricultural needs. .

* * *

Vocational Training—Office of Education reports steady increase in vocational training enrollment since July, 1940. War production workers show 4,555,826 enrollments; rural war production workers, specializing in farm machinery repair and food production, 945,926.

* * *

Lend-Lease Shipments—Lend-Lease Administrator reports decline of lend-lease exports of food and other agricultural products by $29,000,000 from March to April, 1943; but total shipments for all types of materials for April were highest for any month reported to date—$838,000,000 • May shipments totaled $790,000,000: $716,000,000 for goods transferred, $74,000,000 for services rendered.

* * *

Employment Opportunity—War Department announces large-scale program to be launched by Signal Corps for training women as civilian inspectors for duty in factories producing military telephone, radio, and radar equipment; men may qualify if outside Selective Service age brackets or physically unfit for military service.

Merchant Marine—War Shipping Administration estimates that by end of year, 2,300 newly conditioned ships will be in service of United States Merchant Marine: will require 120,000 officers and men. Applications should be made to United States Employment Service or U. S. Maritime Commission.

* * *

Shortage of Engineers—WMC Chairman reports that thousands of all types of engineers now employed on jobs not essential to prosecution of war must transfer, before end of year, to more essential activities where acute shortage is developing.

* * *

Ration Orders—Specific instructions issued by OPA to local War Price and Ration Boards in Eastern States to deny applications for supplemental mileage if car owners live within one and one-half to two miles of place of work, or within 30 to 40 minutes' walking distance; also authorizes boards to recall B or C books already issued for distances which ration holder might be expected to walk.

* * *

Pooling of Road Machinery—War Production Board Government Division reports 35 States now operating under program of pooling government-owned road machinery and equipment, two in process of adopting plan, and three considering it.

* * *

Petroleum Production Rate—Petroleum Administrator announces certification to petroleum-producing states of production rate of 4,328,500 barrels daily in July for all petroleum liquids, a daily increase of 109,600 barrels over June.

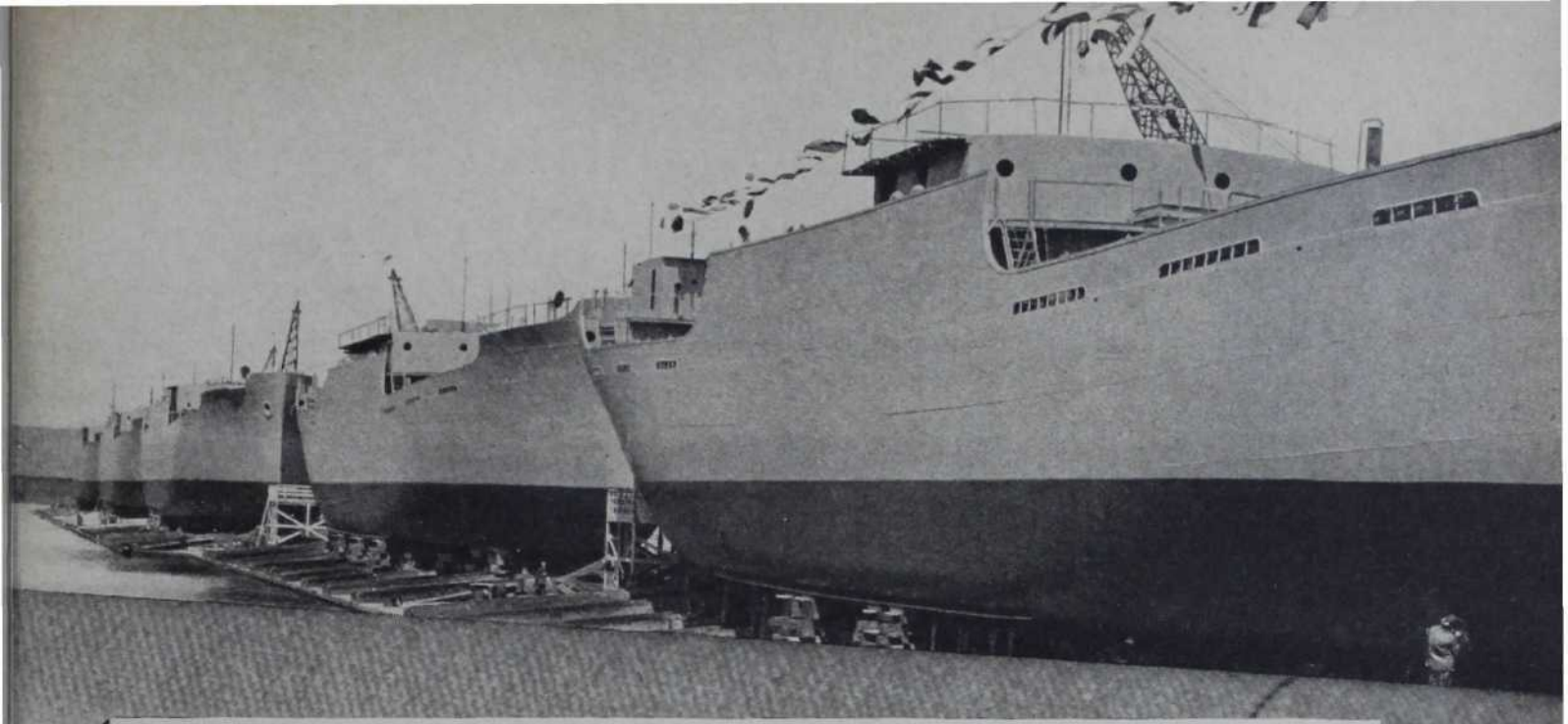
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Requisitioning of Foreign Merchant Vessels—President issues Executive Order extending authority of War Shipping Administration to purchase, requisition, charter, requisition use of, or take over title to, or possession of, foreign merchant vessels lying idle in waters within jurisdiction of United States, including Philippine Islands and Canal Zone, until six months after termination of present war.

* * *

War Expenditures—OWI reports war expenditures by United States during May, 1943, amounted to $7,373,000,000, 1% increase over April; daily rate averaged $283,600,000.

—E. L. BACHER



FIRE CHIEF FINISHED HOOPERWOOD DUCK

Covers the "Quint Fleet"

Five sister ships, nicknamed the "Quint Fleet," recently established a new world's side-launching record at the Walter Butler Shipbuilders' yard in Superior, Wisconsin.

To eliminate the hazard of flammable canvas both on shipboard and throughout the yard, this shipbuilder has standardized on Fire Chief Finished Hooperwood Duck, on the recommendation of the Manitowoc Awning & Cotton Goods Products Company, who fabricate their tarpaulins, covers and other canvas requirements.

Today, this remarkable Hooperwood "Engineered Canvas" — permanently resistant to fire, water, weather and mildew — travels with every branch of our armed forces and the supply forces that back them up.

But, when the peace is won and our entire production is no longer required for war purposes, Hooperwood "Canvas Engineering" will open up new broad fields of usefulness. Awnings that won't ignite from carelessly tossed cigarettes or rot from mildew; special canvas truck covers that will outlast their predecessors several times over; construction windbreaks that hot rivets or sparks can't fire; welding curtains that even an oxyacetylene torch can't ignite; aircraft canvas fabrics that repel gasoline and oil — these and many other applications of HOOPERWOOD "Engineered Fabrics" for Business and Industry will be waiting for you when conditions return to normal.

WM. E. HOOPER & SONS CO.

New York PHILADELPHIA Chicago

Mills: WOODBERRY, BALTIMORE, MD.

Since 1800 (through six wars) the HOOPER name has symbolized highest quality in Cotton Duck and other Heavy Cotton Fabrics, Paper Mill Dryer Felts, Filter Cloth, Rope and Sash Cord.

• *Fire-Chief Finished* •

HOOPERWOOD COTTON DUCK



One common cause

PROTECTING America's future is our common cause, whether we're in uniform, in overalls, or, as in the case of Hardware Mutuals, combating industrial accidents for greater plant safety.

Hardware Mutuals way of doing business, known as the *policy back of the policy*, is far more than a routine service. It makes your interests our first consideration. Applied to Workmen's Compensation Insurance, it starts with a thorough study of individual needs. It culminates in a complete plant safety program, engineered to cover every conceivable hazard. It fosters employe confidence and good will by prompt personal settlement of claims.

Sound efficient management has guided Hardware Mutuals to a position of outstanding strength and stability. In other types of insurance, such as Automobile, Fire and allied lines, Burglary, Plate Glass, General Liability, etc., the *policy back of the policy* is equally diligent in keeping the interests of policyholders foremost. Careful selection of risks has returned to policyholders a total of $82,000,000.00 in dividend savings to date. The current dividend saving on Workmen's Compensation is 20%. Policies are non-assessable. Licensed in every state . . . full-time representatives and offices coast to coast.

Check your Workmen's Compensation requirements against the opportunities for improved service and reduced cost with Hardware Mutuals . . . then send for our free illustrated book, INDUSTRIAL SAFETY PROCEDURE—a concise, helpful guide describing the latest approved measures for plant safety and sanitation.

FEDERATED HARDWARE MUTUALS
Hardware Dealers Mutual Fire Insurance Company, Home Office, Stevens Point, Wisconsin
Mutual Implement and Hardware Insurance Company, Home Office, Owatonna, Minnesota
HARDWARE MUTUAL CASUALTY COMPANY
Home Office, Stevens Point, Wisconsin

SAFETY SERVICE SAVINGS

Hardware Mutuals

Stevens Point, Wis. ★ Owatonna, Minn.
Compensation, Automobile and other lines of
CASUALTY AND FIRE INSURANCE

The Quagmire of Subsidies

(Continued from page 34)

these dislocations by patch-work price policies, Washington now proposes to correct them by digging into the Treasury for a consumer subsidy.

Theoretically, it is possible to adjust many of these dislocations by subsidies at the proper point in the distribution system. Economically, however, it is impossible to do so because every product is competitive with every other in the market. Subsidies at one point tend to produce new dislocations elsewhere. Soon the national dolemaster is rushing frantically from sugar to butter, to coffee, to fats, to flour—pouring the soothing oils of deficit cash on a score or more of economic hotboxes. The net result is a *higher cost* for the delivered item at the consumer level. Such is the economic perpetual motion of subsidies.

Where Baruch came in

ANNOUNCEMENT last month that Bernard M. Baruch had accepted appointment as a non-salaried adviser to James F. Byrnes, Director of the Office of War Mobilization, was news of fundamental significance on the subsidy front. Baruch has been through all this before.

"This is where I came in, back in 1917," he observed informally in 1942, when price controls were launched without wage and farm-price stabilization. But, during the past 25 years, Baruch has specialized in the mechanics of wartime economic mobilization. Experience has impressed on him the fundamental nature of Treasury subsidies.

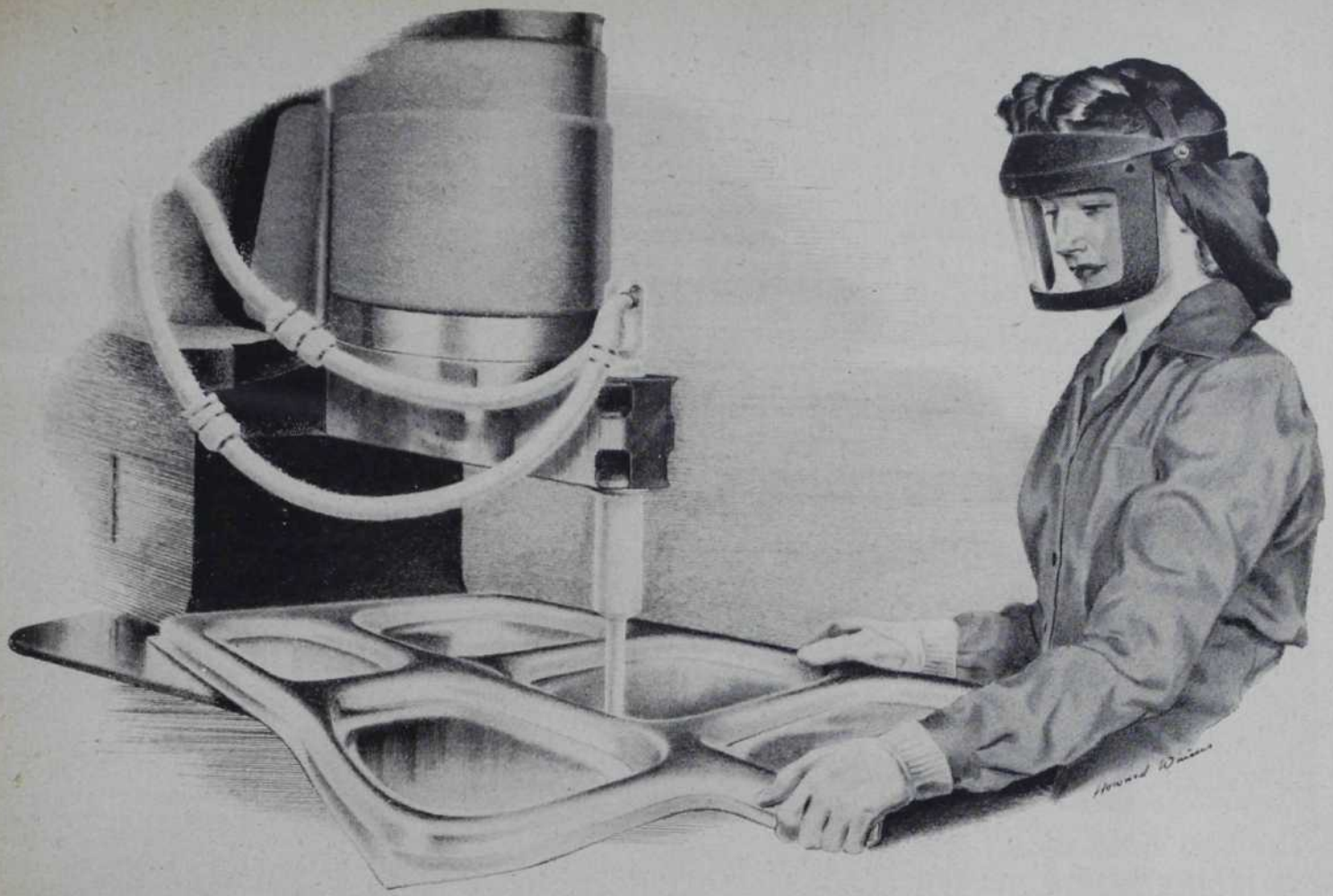
Baruch emphasizes that the national price structure is not an arbitrary compilation of figures, but a chronological series of cost relationships reaching from production to consumption.

In addition to the direct cost to the government, subsidies entail a heavy cost in bookkeeping to be borne by the food industries. The regulations governing the payment of meat subsidies, for example, comprise some 6,000 words. Every packing house must submit a monthly report, not only to the OPA, but also to the War Food Administration and the Defense Supplies Corporation. One section of the regulations requires:

"Every applicant shall keep the records required of him by Food Distribution Order No. 27 and Rationing Order No. 1, and keep the records required by Sections 6, 7, 8 and 9 of this order."

Each application for payment at the end of the month must be accompanied by a certified copy of the current slaughtering permit issued by the Department of Agriculture. Also accompanying each monthly report must be a carbon of the month's operations as reported to OPA on Forms R-1606 and R-1609. All business records bearing on these transactions must be preserved for two years.

"The Defense Supplies Corporation



ICE WATER FOR HOT TIPS



Instrument Repair



Drinking Fountains



Gauge Rooms

FEEDING chilled water or brine to intensely hot welding tips is a great advancement in aircraft production. Now a worker can make 800 welds instead of 30 or 40 before changing or cleaning the tips. Inferior welds are cut down, too. Wear on the welding tips, a highly critical metal, is reduced to the minimum.

Chrysler Airtemp Refrigeration makes possible "cold" welding in aircraft plants across the country. And in countless other war industries, Airtemp Temperature and Humidity Control is bringing new highs in precision production.

Many and varied are the military and industrial applications of Chrysler Airtemp products, described in the booklet CHRYSLER AIRTEMP AT WAR. Send for your copy today—perhaps there are ways that Airtemp can help increase your production efficiency through controlled atmosphere.



RADIAL COMPRESSOR

NB

CHRYSLER-AIRTEMP
Dayton, Ohio

Please send me, without obligation, "Chrysler Airtemp at War".

*Name*_____

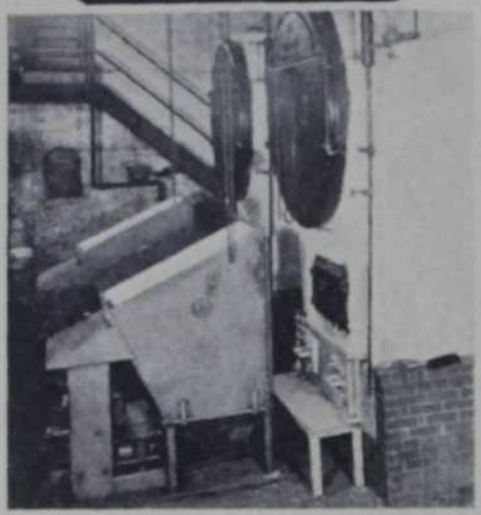
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CHRYSLER AIRTEMP

AIRTEMP DIVISION OF CHRYSLER CORPORATION • DAYTON, OHIO

COAL is Helping Win on the Home Front



Fire Coal Automatically with an IRON FIREMAN STOKER

COAL, America's permanent fuel supply, is the "home front" source of heat and power.

Today in war production plants, buildings and institutions throughout the country, Iron Fireman stokers are firing millions of tons of coal automatically and economically. Steam output is being increased 10% to 35% . . . large savings are made in fuel costs. And already, hundreds of millions of gallons of vital fuel oil are being saved for our armed forces by the use of Iron Fireman commercial and industrial stokers.

Iron Fireman stokers are now available. Find out how quickly Iron Fireman equipment can be installed, and what it will do in your plant. Write, wire, or telephone Iron Fireman Manufacturing Co., 3450 W. 106th St., Cleveland, Ohio. Plants at Portland, Oregon; Cleveland, Ohio; Toronto, Canada.



Two Iron Fireman Poweram stokers at Bearings Company of America at Lancaster, Pa., effect a saving of 28.7% over hand-firing. More heat is delivered to the plant, more uniform temperature is maintained throughout the building.

IRON FIREMAN
Automatic Coal Stokers

shall have the right to declare invalid any claim of an applicant who has failed to comply with the requirements of this section."

Separate accounts must be kept for cattle, sheep and hogs. These records require farmers buying animals for slaughter to record the weight of each animal, the date and place of weighing, and the *name of the person recording the weight*. Any butcher who slaughters animals which he has held for more than 30 days must show in his application for subsidy payments, first, the live weight at time of purchase; second, the live weight at the time of slaughter; finally, the final dressed weight! This means that the butcher must be able to identify any particular carcass all the way through the plant.

"In addition, he must keep a complete record with weights and prices of all his other livestock purchases and all of his livestock sales."

All these rules were promulgated by Regulation No. 3 of the Defense Supplies Corporation, published June 16, 1943, but officially effective "as of June 7, 1943." Thus, the regulations were in effect nine days before they were issued!

There is no basis for estimating what such complex regulations will cost because in some cases the accounting and reporting requirements entail not only bookkeeping arrangements, but a reorganization of the entire manufacturing process to catch required weights and designations at different phases of processing.

Meat prices down

AS applied to meat, the subsidy is calculated to roll back wholesale prices to the level of September 15, 1942. But the American Meat Institute pointed out on May 20, in a letter to Director Byrnes, that wholesale prices of many cuts, as of May 17, 1943, actually were *below* the level of September 15, 1942. For example, regular hams were quoted at 25½ cents, wholesale, on September 15, 1942, and 24¾ cents on May 17, 1943.

At retail, the Bureau of Labor Statistics indicated a composite advance of only about two per cent in beef, veal and pork in 54 cities between September and May. Against this actual increase of two per cent, the Government now proposes a subsidy of ten per cent to roll back prices to the September level.

Officials of the Budget Bureau estimate that 15,000 persons must be added to the government pay roll to administer the program. OPA will need inspectors, checkers and auditors in every food processing plant. The Defense Supplies Corporation will employ thousands of auditors to check the applications of the canners and packers for payment. The Treasury will need additional thousands of check writers and bookkeepers. And the General Accounting Office will need several thousand additional auditors.

More dangerous, the policy of subsidies as a means of preventing price advances must be expected to lead to successive increases in the subsidies. Then, when the time comes that federal expenditures must be curtailed and subsidies eliminated, crash and hardship would be the result all along the line.

Finally, subsidies involve an ever-expanding encroachment of bureaucracy on the day-to-day management of business. Regulations constantly become more onerous. Initiative is discouraged and the quest for better methods, lower costs, new products is smothered under an avalanche of forms and directives.

Every subsidy, no matter how small, encourages the contagious human inclination to lean on the Treasury. Long before the leaning becomes too heavy, the art of leaning is inculcated deeply in national temperament. Then we have arrived at the calamitous point which Oswald Spengler anticipated in *The Decline of the West:*

"That which yesterday was the object of extravagant desires has today become a matter of course, and by tomorrow will be a state of distress calling loudly for help."

Maybe we ought to reconsider that first fateful step into the economic quagmire of subsidies!

Washington Ditties

By BERTON BRALEY



Roll Your Own

There are plans in plenty for
What'll happen after war,
And the planners paint a picture to enthrall us;
You may freely take your choice
And be ready to rejoice
In the post-war world of Beveridge or Wallace.
Or, YOUR plan may be unfurled
For a future Brave New World
All refurbished from the basement to the steeple,
But, before your plans proceed,
Don't you think that you will need
Quite a number of some pretty Brave New People?



WHAT'S A NUT FOR?

• A nut is for just one purpose.

That is to fasten things together.

A good nut holds tight. It doesn't shake loose even under vibration.

This is the particular virtue of the Elastic Stop Nut.

This nut has an elastic red collar in the top. The collar grips the bolt and keeps the nut and bolt threads pressing tight against each other. There's no play. There's no wobble.

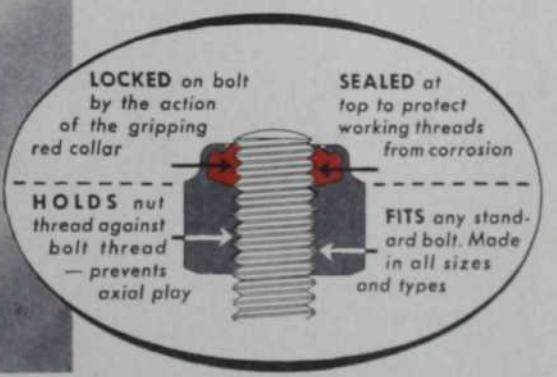
So the nut stays put.

It can be taken off and put back on and still lock. Anywhere on the bolt.

We've made billions of Elastic Stop Nuts.

They're on every airplane made in America. And on all kinds of war material.

And as far as we know, not one has ever failed to do its job surer and better than any other similar fastening.





Elastic Stop Nuts hold tight and make better electrical contact. Connections are safer and more efficient.



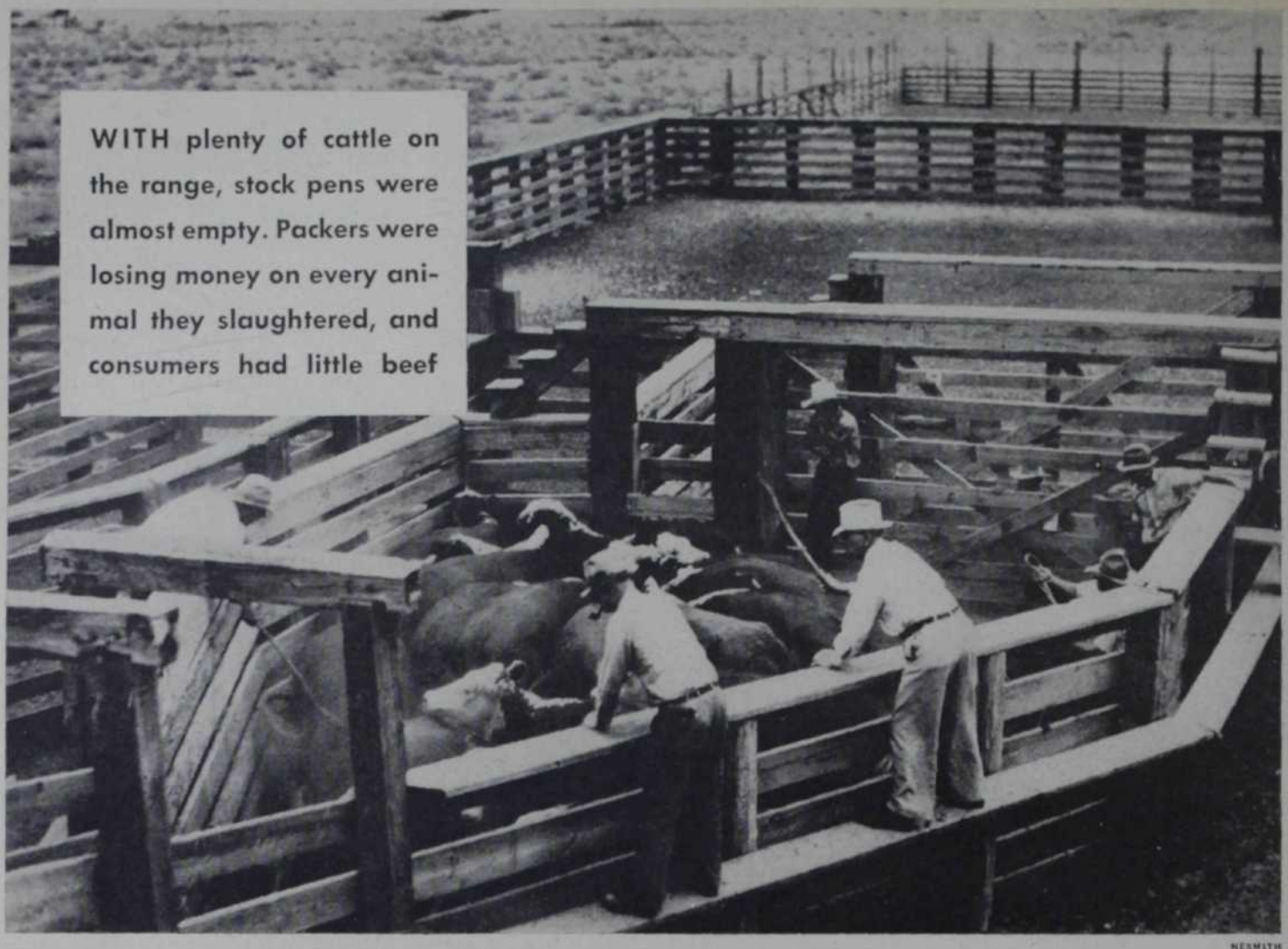
Youngsters' toys take a beating. They'll last longer and take less "fixing" when Elastic Stop Nuts are used.

ELASTIC STOP NUTS

Lock fast to make things last

ESNA

ELASTIC STOP NUT CORPORATION OF AMERICA
UNION, NEW JERSEY AND LINCOLN, NEBRASKA



WITH plenty of cattle on the range, stock pens were almost empty. Packers were losing money on every animal they slaughtered, and consumers had little beef

NESMITH

Will Our Food Go 'Round?

By ART BROWN

IN AMERICA, for the past ten years, we have eaten about all the food we have produced, with the exception of wheat. For 16 years before the war, our food imports exceeded our food exports in value.

In the '30's, we talked about food surpluses. In the seven years between the harvests of 1932 and 1939, our farm crops were reduced 38,000,000 acres. It now turns out that we could have used more food instead of less had the people been able to buy it.

Today we need more food than ever before.

For one thing, increased purchasing power has stepped up the demand. A few years ago, less than half of all American families had cash incomes above $1,000 a year. Now more than two-thirds of all the families have incomes above $1,000. The number of families with incomes above $2,000 has also increased. People with more money to spend buy more food.

In addition, we have some 8,000,000 men in our armed forces to feed—and military men eat more than civilians. The average soldier consumes five and a quarter pounds of food a day; the average civilian, three pounds.

Our Lend-Lease commitments, too, are growing. Moreover, if the war should end within a year, we would be called upon to help feed from 300,000,000 to 400,000,000 persons freed from Axis domination.

Complicated problem

AMERICA'S food problem is gigantic—and complex. It calls for stimulating food production to the utmost, seeing that the food is properly distributed and, at the same time, controlling prices to restrain inflation. Can this job be done?

For the past six years, our crop yields have been exceptionally high. In 1941, we broke all records for food production. Then in 1942—thanks to better seeds, higher-yielding varieties of crops, improved farming methods and, above all, unusually favorable weather—we exceeded the '41 record by 12 per cent.

Military requirements and Lend-Lease took 15 per cent of our total food production for last year, so we just about came out even.

To meet the demand for more food in 1943, the Department of Agriculture last November called for an overall increase in farm production of four per cent over '42.

Government bureaus, however, sometimes move slowly even in emergencies, especially when they are reversing themselves. In spite of the fact that more wheat was to be needed, the Government did not get around to lifting its restrictions on wheat

Here's one thing that *does not* cause higher prices

FOR many reasons, the prices of most things you buy are higher today.

But railroad freight rates are not one of the causes.

The fact is, railroad freight rates generally are not higher today than before the war. Many are actually lower, and the average amount received by the railroads for each ton they haul is the lowest in the past quarter-century.

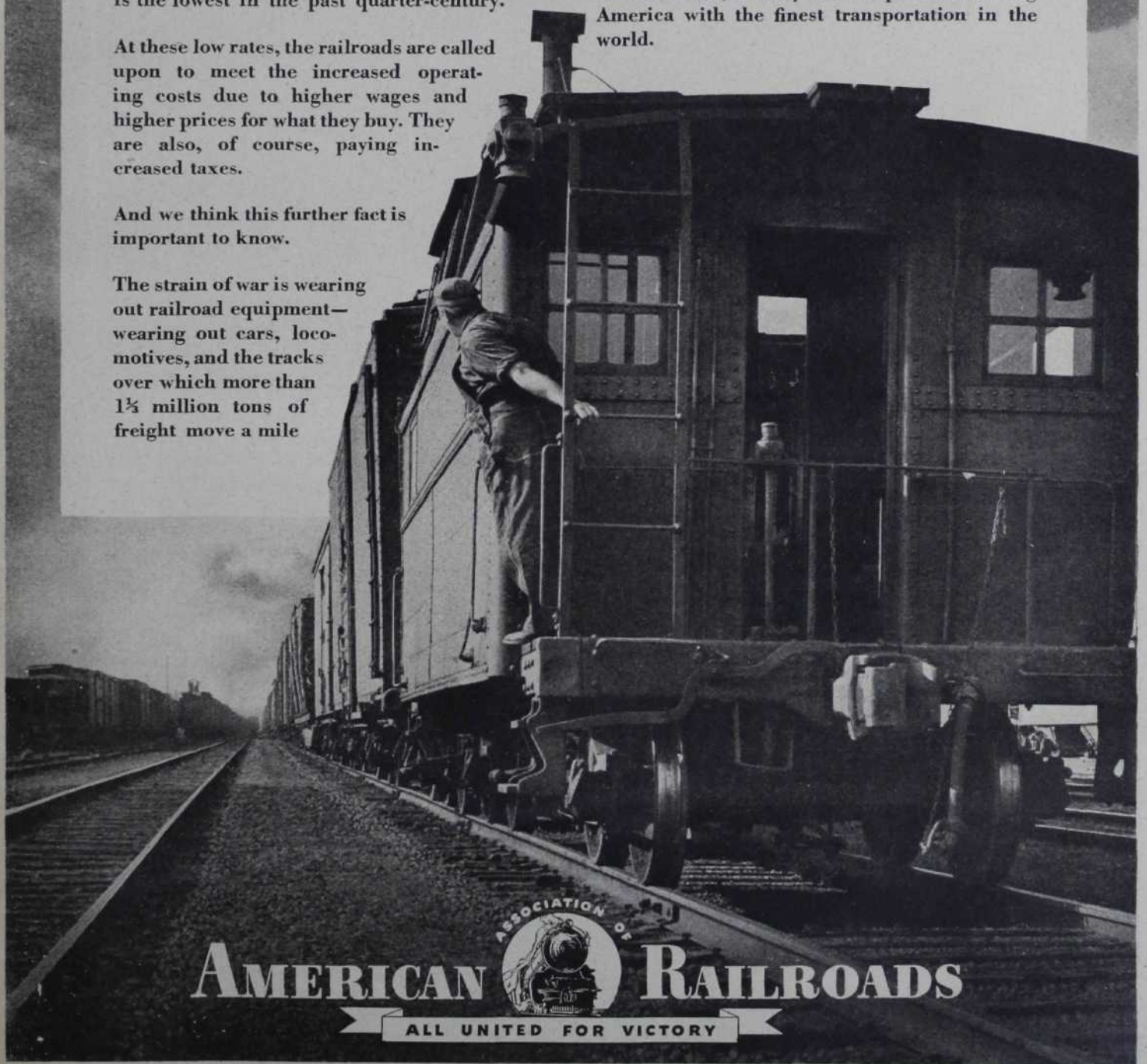
At these low rates, the railroads are called upon to meet the increased operating costs due to higher wages and higher prices for what they buy. They are also, of course, paying increased taxes.

And we think this further fact is important to know.

The strain of war is wearing out railroad equipment—wearing out cars, locomotives, and the tracks over which more than 1⅓ million tons of freight move a mile every minute of the day and night.

Some day, all this will need the sort of replacement which is not possible in these days of war shortages. It will take billions of dollars to do that job—just as it took billions to bring the railroads to their present high efficiency.

To do this with railroad money, the railroads must therefore have a chance now to provide for the future, so they can keep on furnishing America with the finest transportation in the world.



ASSOCIATION OF AMERICAN RAILROADS

ALL UNITED FOR VICTORY

planting until January of this year. That was about two months *after* the seeding of winter wheat had to be completed.

Last October—when the War Production Board thought the farmers could get along with less farm machinery—the output of farm machinery was ordered cut to 20 per cent of the amount made in 1941.

Farmers and others familiar with the situation knew that this was a serious mistake.

In the middle of June, WPB announced that, effective July 1, it would release 900,000 tons of steel and other materials for farm machinery. This was too late to benefit the 1943 farm program—too late even for plowing for winter wheat for '44. However, increased production of farm machinery is now under way.

Last December, the sugar beet industry agreed on a program for increased acreage for 1943. But the Government did not finally decide on the terms of the contracts between farmers and processors until the end of March—too late for the beet farmers to plant. The resulting reduction in beet acreage is expected to cause a loss of one billion pounds of sugar.

Another case of "too late" was in getting started on the production of protein concentrates urgently needed as feed for livestock. Processing plants fully equipped and ready to go waited months for WPB's permission to switch on the electrical power and get started.

The growing season this year got off to a bad start: early-season droughts in the plains, late frosts in the South, floods over more than a quarter of the nation's most productive farmlands.

There was, and is, a shortage of farm hands. Two million men have left the farms. Other millions of itinerant workers have gone into the services or into war plants. Lack of replacement parts for farm machinery affected farm production; and in the East, gasoline curtailment proved detrimental.

In February, when the county agricultural agents sent their reports to Washington, they indicated that farm production for '43 would be at least ten per cent below '42. The Department of Agriculture's June 1 report showed the poorest crop outlook for three years. Government officials reported that a serious food shortage was on the way.

By July, however, growing conditions had greatly improved, particularly in the Midwestern grain, livestock and dairy regions. But the Department of Agriculture's July 1 report still showed that this year's crop would be ten per cent below last year's.

The War Food Administration estimates that, for the immediate future, the civilian supply of meat will be five per cent less than in 1941-'42.

Except for fluid milk (which probably will be rationed) dairy products will fall off sharply. Evaporated milk (already rationed) will be about 14 per cent below the 1941-'42 average.

Dried beans and peas will be eight per cent less than were available the past two years. There will be 21 per cent less canned vegetables than last year; and (biggest cut of all) 37 per cent less canned fruits and juices.



MCMANIGAL

With a ceiling on corn and a floor under hogs, farmers held on to their corn, converted it into pork. Result: hog population reached an all-time high, dairymen and poultrymen could not buy feed, and some corn-products plants had to shut down



A few bright spots

ON THE OTHER HAND, there are a few bright spots:

We are promised a third more poultry (chickens and turkeys) than last year; three per cent more sweet and Irish potatoes; about five per cent more cereal grains (to help take the place of meat and manufactured dairy products); and one per cent more eggs.

To help meet the shortage of butter, there will be from 55 to 60 per cent more margarine.

Great Britain seems assured of a bumper crop. Although thousands of





OUT OF THE EARTH

Those formidable fighting machines—the mighty tanks—are born out of the earth. Tremendous quantities of minerals and other materials are required before they can be constructed and take active part in war.

The transportation of those materials—and the assembled units—is the responsibility of America's railroads.

That's one phase of vital war-work shouldered by Union Pacific. Over the "Strategic Middle Route," uniting the West with the East, gigantic freight locomotives haul trainloads of armament and supplies. Troops—too—by the thousands. A great army of railroad workers are "keeping 'em rolling" day and night. It's a responsibility they are proud to assume.

The Progressive

UNION PACIFIC RAILROAD

ROAD OF THE STREAMLINERS AND THE CHALLENGERS



BULL'S-EYE FOR PAPER!

One day a holocaust may visit Tokyo—swarms of slim incendiaries raining from the sky. *Paper* fins will guide them to their marks. For paper fins are now replacing metal on incendiary bombs.

Modern war has thousands of uses for America's paper and wood pulp production. Explosives, helmet brims, food packages, gas tank liners, insulation, packing materials, flying jackets, hand grenades...paper pulp is used in making these. Often pulp products replace steel, aluminum, synthetic rubber, phenolic resins and other more critical materials.

It takes 30,000 pounds of pulp in the form of blueprint paper to plan a battleship. Through April, 4,000,000 pounds of paper pulp had been used to print War Bonds. Packaging 700,000,000 cans of tobacco a year in paper is releasing 80,000,000 pounds of steel for weapons.

Yes, wood pulp is a strategic material—a material of paramount importance in this war. Supplying it to our fighting forces in mountainous quantities and in a multitude of finished forms is the special wartime job of the paper industry. In this effort, the management and workers of Kimberly-Clark Corporation are proud to be doing their full share.

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acres of farmland have been converted into military installations, the acreage under tillage has been increased by more than 50 per cent since the start of the war. Wheat acreage is up 35 per cent; oats 72 per cent; potatoes 80 per cent; vegetables 35 per cent.

This year's Lend-Lease allotment to Britain is double that of 1942, but with a bumper crop in sight, Britain may not require as much food from us as we had counted on sending her.

India and Egypt both harvested record-breaking wheat crops this year.

Favorable reports on food have come out of Russia recently, though Russia's food needs are still grave. Last year's crop was low. The Ukraine was in German hands, and military operations ruined the crops in the North Caucasus. This year the Germans still hold the Ukraine but the Russians had an excellent harvest in the south, and prospects in central and northern Russia are good.

Australia and Argentina both have huge stores of wheat. Canada has large wheat reserves, the movement of which is limited only by transportation.

Victory gardens—some 15,000,000 strong—are turning out better than food officials had expected. Also we have some margin in the food we waste. The livestock industry, for instance, reports that 25,000,000 pounds of meat are lost annually through rough handling in transportation.

Lots of food wasted

THE Food Distribution Administration estimates that we waste from 30 to 40 per cent of our total food supply—that each year we throw away food worth $4,000,000,000. If every American family would save one slice of bread a week, says the Bureau of Home Economics, it would add up to 100,000,000 loaves of bread a year. If every civilian would save half an ounce of butter a week, it would equal the total amount of butter our armed forces consumed in 1942.

To stretch our food supply, we will have to make some drastic changes in our national diet. To take the place of protein foods, such as meat, fowl, cheese, milk and eggs, we will have to turn to oatmeal and other wholegrain cereals.

We will have to eat more dried beans, peas, soybeans and peanuts. Soybean griddle cakes may take the place of bacon and eggs at the breakfast table.

Whales, incidentally, may be coming into their own. Whale steaks have appeared in San Francisco markets and are expected to show up in other cities. In July, the California whaling industry was dressing an average of 12,000 pounds of fresh whale meat a day—and was planning to step up its production to 30,000 pounds a day.

"There will be enough food for a healthful diet," says Food Administrator Marvin Jones. But it is possible to have plenty of crop-raising capacity—and still go hungry.

As Herbert Hoover points out, "Organizing the food front means more than just increasing acreage, manpower and farm machinery. It also requires wise coordination of prices, processors, of distribution and rationing." "Wise coordination" is one thing we seem to be lacking. Nine federal agencies now deal separately with the food problem—getting into each other's way: Department of Agriculture, BEW, OPA, WPB, WMC, Lend-Lease Administration, Army, Navy, and War Food Administration. They conflict, cause delays.

In 1942, the Commodity Credit Corporation sold 225,000,000 bushels of wheat for feed—one-fifth of the year's crop. Last fall, the Department of Agriculture ordered wheat acreage *reduced* 927,000 acres. It also asked for an all-out production of livestock. Farmers were quick to comply. But, with our store of wheat reduced, grain acreage restricted, and increased numbers of livestock to feed, a feed shortage resulted.

There is plenty of meat "on the hoof." The Department of Agriculture estimates that, by January, 1944, our cattle population will reach 82,500,000, but practical cattle men say that we already have more than 90,000,000 head. (We had 68,000,000 in 1929.)

Today's surplus of cattle is 15,000,000, or perhaps more than 20,000,000, depending on whose estimate you take.

"If we slaughtered half our present surplus," says the Texas and Southwestern Cattle Raisers Association, "we would produce enough meat to supply normal amounts of beef for a year to 200,000,000 persons."

Yet, butcher shops today have little or no beef to sell. The trouble is that months ago OPA clamped cents-per-pound ceilings on meats at the packing house, wholesale and retail levels. No ceiling prices were put on livestock. Cattle prices rose until packers lost money on every animal slaughtered. Consequently, slaughtering slowed down.

The middle of June, the War Food Administration ordered that all federally inspected slaughterers must further reduce civilian meat, and set aside 45 per cent of their weekly kill for government procurement agencies.

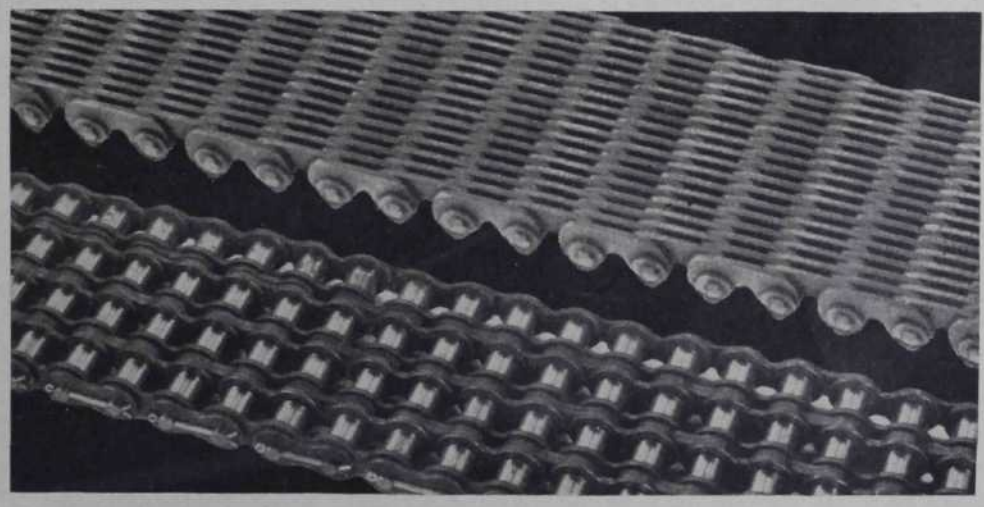
The nation's meat famine grows acute, the livestock supply increases, and the store of feed runs lower.

The government planners ran into difficulties on corn, too.

Corn is important. It is human food. It is feed for hogs, cows and poultry. It is industrial starch, sweeteners, industrial alcohol, synthetic rubber, paper, textiles—all articles of war.

OPA put a ceiling of $1.07 (Chicago) a bushel on corn sold in the open market. At the same time, the Government guaranteed a floor price for hogs at $13.75 a hundred pounds. Actually the price of hogs in recent weeks has been close to $14.50—at times as high as $16.50. The price has been permitted to stay high to stimulate production.

The relationship of corn prices to hog prices which OPA set up meant that the farmer could get about $1.40 a bushel for his corn by feeding it to hogs and selling the pork. As a result, the 1943 pig crop is expected to total 127,000,000 head as compared with 105,000,000 last year and with the ten-year average of 73,000,000 head. To feed all these pigs up to de-



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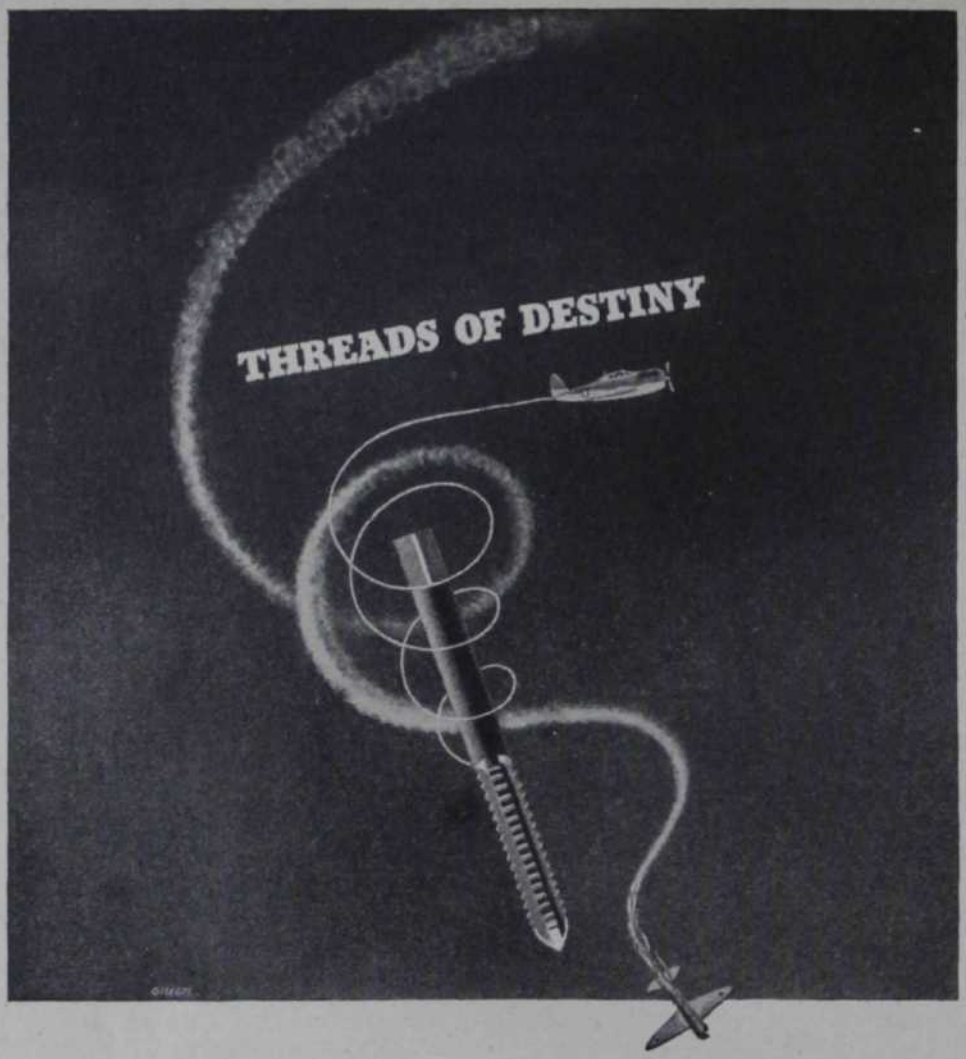
Users say Morse drives increase output twenty to twenty-five percent—cut power losses and down time. And, generally the first cost is lower than other types of drives.

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No, the threads upon which the destiny of modern free men depends are the strong and precise steel threads of tools which fashion *better* planes, tanks, guns and other fighting equipment *faster* than our enemies.

And it is with much gratification and a just amount of pride, that the Detroit Tap & Tool Company hears of the excellent performance of war materiel as reported by our men, and their allies on far flung battle fronts.

Much of this equipment has been created with the aid of Detroit Tools, and we can't help but feel that the high standard for quality set by the Detroit Tap & Tool Company played its share in the superior showing made by these American arms. The list of the nation's leading organizations producing machines of war which we serve is growing daily. The Detroit Tap & Tool Company has become a name which answers today's need for Threading and Cutting Tools that reduce machine-hours and operating costs.

You've done your bit—now do your best

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sirable slaughter weight would take all the corn in sight, and then some!

Dairymen and poultrymen found it increasingly difficult to buy corn, although farmers had about 800,000,000 bushels on hand. A number of corn-products plants had to shut down. The War Food Administration, seeking to solve the problem, requisitioned the corn stocks of 96 terminal elevators in 16 Midwestern cities.

In June, canneries in Maryland, Texas, Indiana, New York and elsewhere were forced to close down. Price ceilings and wage controls made it impossible for them to obtain and hold workers. Mature canning crops were diverted to the fresh markets, to freezers and briners.

The Office of Economic Stabilization granted a subsidy to canners to allow for increased wages—but this subsidy applied only to packs of corn, snap beans, tomatoes and peas sold to the Government.

What is the solution?

ECONOMIC planners in the Government feel that there should be still tighter control of growers, processors and wholesalers. Two new plans are considered:

1. Purchase for resale: The Government would purchase entire crops of certain foodstuffs—principally perishable or scarce crops—and then parcel them out on a basis aimed to spread the supplies evenly among the consuming areas, and in that way, make them last until the next crop is available.

2. Allocations: The Government would allocate supplies among processors and wholesalers without actually becoming the owner of the supplies. For instance, it might allocate livestock to packers, then tell them how much meat they could sell to wholesalers, and prescribe the methods to be followed in releasing stocks to retailers.

When Chester C. Davis was Food Administrator, he remarked, "I sometimes think that in Washington there are people who think food is a vital necessity, but one that will be there no matter what we do."

If we are to encourage maximum production of food and insure equitable distribution of that food at a fair price, we must have a sound, practical food program and, without losing any time, put it into practice.

Business, through the National Chamber of Commerce, has proposed such a program. Here it is:

1. **Coordinate,** through *a single responsible head,* all government activities affecting food production, distribution and price controls.
2. **Set up for farmers** *a manpower program* which will give even greater recognition to food than it now has as a vital necessity.
3. **Assure the farmer of** *adequate supplies of farm machinery and of fuel* for power.
4. **Simplify the operation** *of price controls* with a greater utilization of the experience of those engaged in producing and marketing food products.



They're sweeping the skies

with a new kind of brush

In America's fighting planes, dependable auxiliary power is required to perform many a vital function. It operates the retractable landing gear, powers gun turrets, varies propeller pitch, moves wing flaps.

Heart of the plane's d-c system is the generator, which Westinghouse is building by the thousands. And the efficient functioning of these vital power plants depends upon tiny carbon brushes.

For ordinary low-altitude flying, standard brushes gave satisfactory life. But at altitudes over 30,000 feet, strange things happened. Brushes gave out in a few hours, generators stopped functioning at critical times. The situation was growing serious.

Westinghouse research engineers went to work with the brush manufacturer—to determine the causes and a remedy. A new method of treating the brushes was developed—to offset the effects of thin air and low humidity at high altitudes. Today, the life of these brushes has been stepped up as much as 50 times for high-altitude flying—with still longer life soon to come.

This is W.E.S. at work—co-operation between Westinghouse engineers and customer engineers to find the solution for any electrical problem, no matter how large or how small. This kind of co-operation is available to you. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. J-91014

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A nationwide corps of engineers offers you electrical and production experience gained through years of working with your industry.

In addition to engineering help on specific industry problems involving electrical power, these men can assist in:

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Material substitution: adapting available replacements for critical materials.

W.E.S. is available to *all* industries. Put it to use today on your production problems.

Westinghouse

PLANTS IN 25 CITIES... OFFICES EVERYWHERE

Say Now, "Shibboleth"

UNCLE SAM is taking steps to make certain that we know our names and how to pronounce them correctly



The Board did not take its labors seriously enough to spend money

ALTHOUGH in no sense a widely traveled person, our small migrations have taught us the need for universal understanding and acceptance of definite geographic nomenclature. There was the time, for instance, when an auto trip almost went astray because the best available local directive was to "turn right at a big gum tree." On another occasion we almost rode past our stop on the New Haven railroad because the train man announced "Porchuster" and we were intending to get off at Port Chester.

Even in biblical times, the matter of pronunciation was a problem for some people. Those, it will be recalled, who could not prove they were Ephraimites by being able to say "Shibboleth" instead of "Sibboleth" were slain. "And there fell at that time of the Ephraimites forty and two thousand." (Judges 12:6.)

We ourselves cannot get over a feeling of personal affront when the uninformed refer to our native state as "Iohwa" or "Ioway" when we know the proper pronunciation is "Iuwuh."

The sum of such petty strains on our national unity has long been known to be considerable, and was first recognized in 1890 when President Benjamin Harrison set up the United States Board on Geographic Names, with a group of scientists serving without pay as its members. The Board, one is inclined to believe, did not take its duties very seriously. At least, it spent very little money. Somewhere it picked up a secretary and two stenographers but its impact on national geographic intelligence was negligible. Travelers in Massachusetts, even today, who ask for Lake Manchaugagognanchaugagognagungamaug* will get little help from those who know that body of water as Lake Webster.

In time of war, of course, such problems take on a new significance and, apparently, it remained for a war to arouse us to the need for straightening them out. Steps toward improvement were taken as early as 1934 when President Roosevelt, in Executive Order No. 6,680, transferred the somnolent Board of Geographic Names to Secretary Ickes' Department of the Interior. There it attracted the attention of Dr. Meredith F. Burrill, former associate professor of Geography at Oklahoma A. & M. College, more recently chief of research and analysis of the General Land Office.

Dr. Burrill had some conferences with Oscar Chapman, Assistant Secretary of the Interior. As a result of these, he told us, "Mr. Chapman and I called on other government representatives and they were all impressed with the need for an enlarged agency. By January, 1943, the situation in regard to pronunciation of geographical names had become acute, so on February 25, Secretary Ickes set up the new Board on Geographical Names (adding the 'al' to Geographic) in a Department Order." Dr. Burrill is chief of the revived bureau. We called on him in his suite of offices in the New Interior Building, and found him to be an alert, youngish, professor-like gentleman who was cordial but inclined to be taciturn.

"We have to be careful to whom we talk, you know," he explained.



In January the problem of geographical names became acute

By that time, in spite of the manpower shortage in Washington, he had managed to find 110 employees for the Board and was looking for some 30 more. In spite of the problems of organization, the Board had already made some contributions to geographical preciseness by preparing a list of words with their proper pronunciation. Quite properly, there were mostly words which figure in the news.

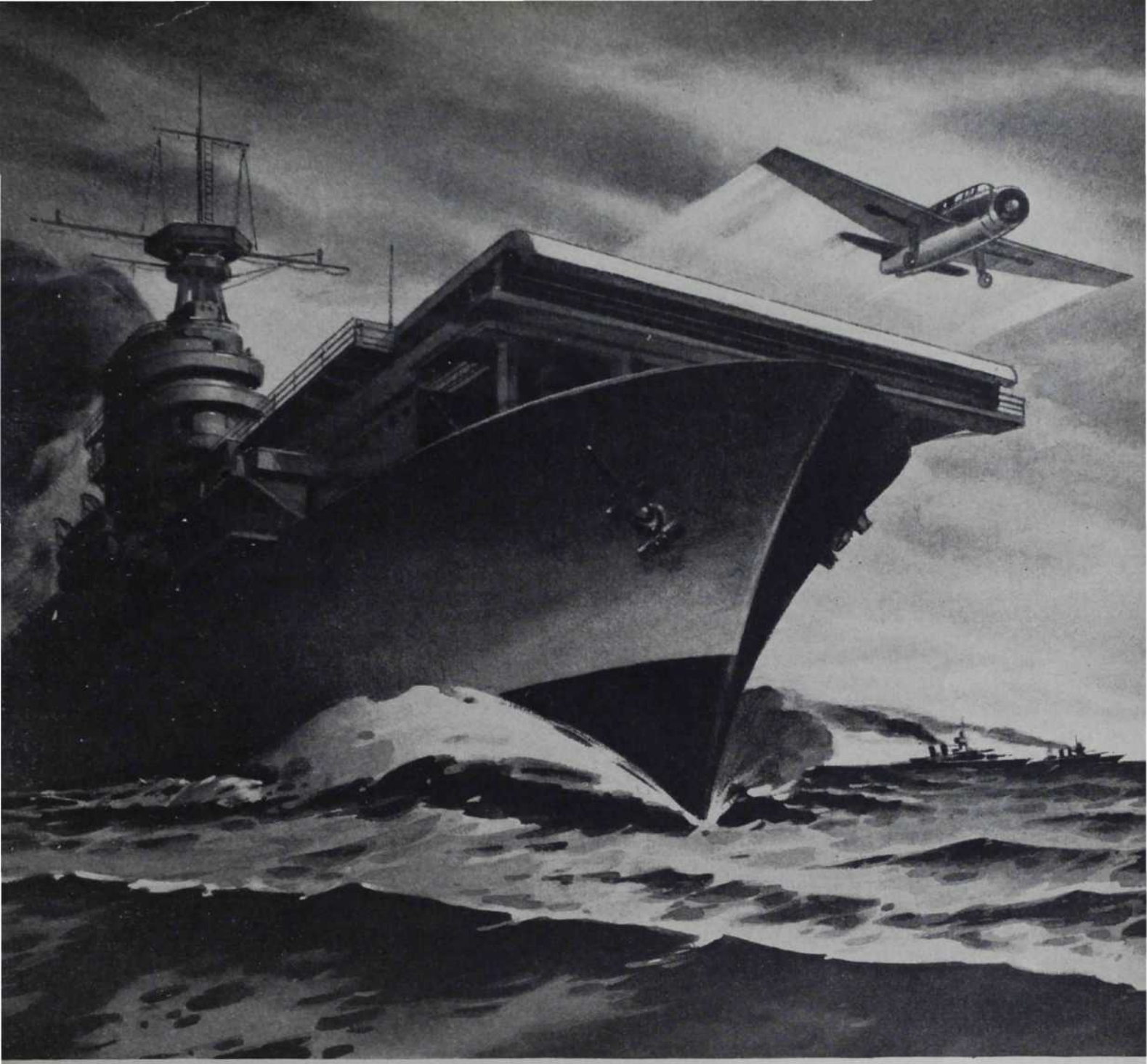
Although the Interior Department release that had first called our attention to the resuscitation of the Board had said it was "cooperating with the geographic organizations of all the united and neutral nations" and that "much of the work is of a confidential nature for the duration but will become generally available after the war," Dr. Burrill smiled at the idea of secrecy.

"Actually very little of our work is secret," he said. "Our first job will be to help other government agencies standardize their geographical work, particularly as this relates to the use



"It is our job to see that a mountain range has only one name"

*Also known as Chaubunagungamaug, for short.



TAKE-UP BEFORE TAKE-OFF

DOWN the flight deck they come roaring, one after another—steel-spitting birds of prey—on the take-off for a date with America's enemies. Today, these marvels of speed and power are spreading their wings over the seven infested seas.

But far more goes on aboard Uncle Sam's aircraft carriers than meets the eye on the flight deck. Below, on the hangar deck, the planes must be lifted and moved about—for there are tired engines to be revived, battered wings to be repaired or replaced, scores of adjustments to be made by the highly trained crews who keep planes in fighting trim. This calls for fast work; for swift, efficient handling when time is short. Here, the need is answered with dependable P&H Electric Hoists.

In the important field of materials handling, P&H Electric Hoists and Cranes are serving in countless ways; in every vital industry, as well as in combat zones. For 60 years, in peace and in war, America has looked to P&H leadership in the designing and building of materials handling equipment.

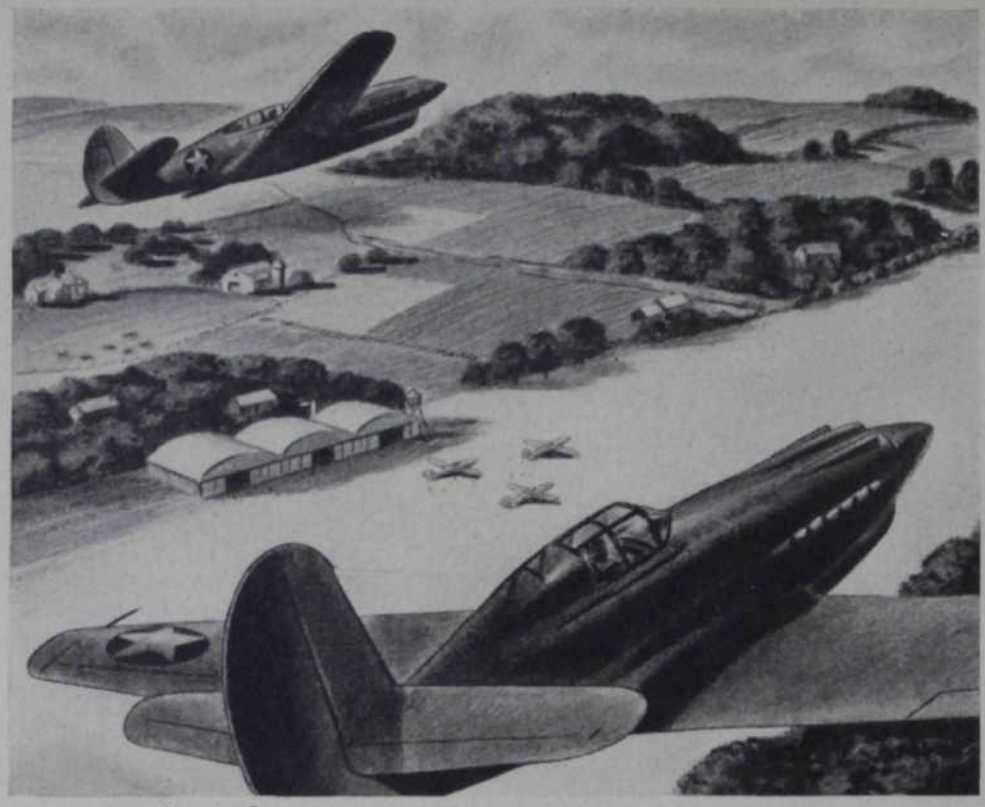
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BUILDING the vast network of airports — emergency landing fields and strips — required for our tremendous military aviation training and development program was, and still is, a vitally important "RUSH" war assignment.

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Here is another example of Cleaver-Brooks engineering versatility in the building of sturdy, efficient machines.

"A new machine — or a better machine — can always be designed and built to do more and better work — faster" — this is a first principle with the Cleaver-Brooks organization.

In this progressive spirit we work for Victory and prepare for peace.



Truck-mounted Portable Pumping Booster used in airport and road construction.

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★ CLEAVER-BROOKS PRODUCTS INCLUDE: ★



Steam Generators



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Special Military Equipment

of spoken and written words in the news.

"There are towns in this country known by as many as six—or even eight—titles," Dr. Burrill pointed out. "It is an exasperating problem and one that no other government agency yet has tackled. Our Board will be able to trace the background of the locality and render an expert decision immediately as to what it really should be called," he explained. "I want to stress the fact that we are streamlined to do a fast job on any problems of this type.

"Another problem that might arise would be this. You might be going down a highway and would see a mountain range. You might call it the Messabi Range, and so it might be known generally. Later, you might see the same range of mountains, from another highway, and it will be known by another name. It is our job to see that that mountain range has only one, uniform name."

Organized for speed

"SPEED is the essence of our work."

To assure this speed, Dr. Burrill, who receives $8,000 a year, has set up an organization of two divisions: the Research Division and "Records and Services." He also plans a larger advisory body, made up of geographers and specialists throughout the nation.

Each of the Board's present Divisions has five sections. Research has Regional Research, Case Research, Linguistic and Historical, Source Materials and Cartographic. Under Records and Services are Administrative, Name-files, Promulgation, Inquiries and Stenographic Pool.

With this set-up, the Board will be prepared to handle any problem in its field, however urgent. Regional Research will have accumulated, analyzed and digested all materials relative to nomenclature and descriptive features in the various regions. Case Research will make the actual choice of a name, give official advice as to how to write it and will list the various ways of spelling. The Linguistic and Historical Section will be responsible for the origins of the names of geographic places and will be required to know the history of all such geographic names. The Source Materials Section will find, annotate and keep all source materials.

As we were leaving, Dr. Burrill introduced us to Dr. Edwin J. Foscue, assistant director of the new Board (at $5,000 a year), who handles details for Dr. Burrill while the latter concentrates on the larger problems of administration and geography. We heard Dr. Foscue ask Dr. Burrill's stenographer how she pronounced, "What."

"Watt," she said, as if she were talking about an electric light globe.

"I thought so," he replied. "The question of accents is going to be one of our biggest problems. You can pronounce 'what' four different ways—'whut,' 'wot,' 'watt' or 'what' depending upon where you were born and reared."

After we got back to our office we called five Congressmen to learn what they knew about the new organization. None had ever heard of it.



MORE POWER FOR TANKS TODAY— CHEAPER POWER FOR AMERICA TOMORROW!

AMERICA'S tanks pack a powerful push as well as a powerful punch. And more times than most people know, this push comes from a General Motors Diesel engine.

What's more, you'll also find these rugged, hard-working power plants in landing barges, patrol vessels, military trucks, construction tractors and many other wartime jobs where sturdy dependability is required.

They burn cheaper fuel and use less of it—operate with a minimum of attention.

Of course the needs of war are taking every engine that even our expanded production can make, but when peace comes America will profit —through low-cost power for many new applications.

So while now GM Diesels are adding strength to America's fighting arm, they will be one of the important contributions to better days after victory is ours.



New eras of railroading follow in the footsteps of war. Another new era of railroading is assured in the wake of this war. General Motors Diesel locomotives already are establishing new standards of transportation.

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ENGINES.....15 to 250 H.P.....DETROIT DIESEL ENGINE DIVISION, Detroit, Mich.

ENGINES..150 to 2000 H.P...CLEVELAND DIESEL ENGINE DIVISION, Cleveland, Ohio

LOCOMOTIVES.....ELECTRO-MOTIVE DIVISION, La Grange, Ill.

Government's Biggest Business Man

(Continued from page 36)

contract remains in effect: (1) cost of the plant plus interest, less a set depreciation figure for each year it is government owned, or (2) cost plus interest, less the amount of rent paid. On the other hand, the company can turn the plant back to the Government after the war without obligation.

What will happen to these tremendous facilities?

"That," says Sam Husbands, with a finality that wilts, "is The Question."

He knows that these plants are political dynamite. He knows that the plants will never be disposed of by groups, but that each "plancor" will represent a particular problem.

However, he does remark, rather enigmatically: "What can be done with 2,160,000,000 pounds of aluminum a year in America? We don't eat aluminum, you know!"

Going a step further, he points out that, in 1939, the United States consumed some 5,000,000 pounds of magnesium for all purposes.

In 1943, he adds, we are producing some 600,000,000 pounds—or 120 times as much. How, he asks, can we use 120 times as much magnesium in the first year of peace as we used in the last year of peace—and '39 was a pretty prosperous year?

The same question can be asked about high octane gas, steel, airplanes, machine tools, radios, rubber and chemicals, in his opinion. But when you get specific, he just smiles.

"Our prime problem, when we started out, was to build the plants quickly to make the materials to win the war. Our second problem was to make every contract protect taxpayers. We feel that we have succeeded both ways. We work with everybody's money. We must protect it as well as we can."

Tomorrow's problem

NEITHER Mr. Husbands nor any of the men at RFC who formed DPC and made plans to rearm America foresaw the problem they were making for the future. They were living—and working—in the present, always. They still are. If Sam Husbands worries ever about the future, only one problem piques his mind. That is the problem of fulfilling quickly the terms of more than 2,000 contracts which have a 90-day to six-months' clause saying that DPC machinery now in private plants must be moved, come peace.

"It'll be like a new war all over again to us," he says, grinning. "If I have a postwar problem, that's it. . . ."

Mr. Husbands is not a lazy man, but he moves his body slowly. His mind is another matter. As president of the Federal National Mortgage Association, he recently put up for sale mortgages that the agency had bought from banks over a period of years—and made a profit of several million dollars for the "Fanny May." He has been criticized for making a profit for a government agency, but he points out that he is prohibited by law from selling those mortgages at less than they are worth—"and if they aren't worth that, why would anyone buy them?"

A man will have to stay up mighty late to trip this unorthodox economist, who never studied economics. Perhaps this is because he knows the value of a dollar, personally. The day Sam Husbands came to Washington, he had liabilities of $24,500 and assets of $3,500, approximately.

Today, when you ask him about those liabilities, he draws a thick sheaf of checks from his desk.

"Look at 'em," he says.

Looking, you see cancelled checks for amounts ranging from $10 to $500. They total more than $25,000. In ten years he has paid back every dime he owed in 1932—"plus five per cent interest a year."

Sam Henry Husbands was born on February 14, 1891—St. Valentine's Day—in Florence, S. C., the only son and second child in a family of eight children. His parents, James Sam Husbands and Fannie Heath Husbands, lived and died in Florence. His father opened a general store in the little town that sprang up when the Atlantic Coast Line Railroad established shops at what later became Florence, and there made a good living but, when the children were coming along, the family didn't have an easy life.



"Well, for one thing, you're going to have to stop filling out Government forms"

Sam Henry can remember the time when he chopped wood for two bits a month, and, although things eased a little as Florence grew, the boy never has forgotten what a callus comes on your hands from work.

He started to school in a Florence kindergarten. At 16, he graduated from the town's only high school.

He expected to go to college but, in the summer of 1917, he went to work in the People's Bank (later the First National Bank) as a runner. His starting salary was $35 a month. A year later he was raised to $75 and appointed assistant teller. Thoughts of college left him then. Several years later, he was promoted to teller and given $100 a month.

To Mexico in a hurry

IN May, 1916, he joined the National Guard—"for fun."

A month later, while he was visiting a young woman, the company captain called him on the telephone:

"Meet me down in back of the tobacco warehouse right away," the captain ordered. "We're going to the Mexican border."

"You go to hell," Sam said, hanging up.

But the captain called back.

"If you don't show up, you can be co't-martialed. This is wah . . ."

Sam, a corporal, ambled over to see what was up. Sure enough, there was the company, assembled and excited.

Next day they trundled off to Camp Styx, S. C., in stiff collars, silk shirts, Sunday shoes and derbies. By August they were outfitted in regulation Army garb and were able to keep step. Then they went to Fort Bliss, near El Paso, on the Mexican border, but saw no action there.

In December, Sam's father died. Sam obtained a short leave, but at home learned that he had been appointed administrator of the estate—a store, some rental property, insurance money. Back at camp, he managed to get himself an honorable discharge by February.

In the next six months, he ran the store, collected the rents, lived the life of a small-town squire—until the Army got him again by way of selective service.

He went to Officers' Training Camp at Oglethorpe, Ga., came out a first lieutenant in the Field Artillery. When he joined the 21st Cavalry at Houston, it was being transformed into the 79th Field Artillery of the Seventh Division.

Sam Husbands says he learned a lot in the Army, not the least being the truth of the old saying that top sergeants run things and that officers provide the trimmings.

They went to France in July, 1918, trained in Brittany during September and October. By November 10 they were ready for the front. Next day the Armistice was signed.

Mustered out nine months later, Sam

headed back to Florence, where he became assistant cashier of the bank again. In the next six years, the two notable events in his life were his marriage in 1923 to Miss Teressa Dew, of Latta, near Florence, and promotion to cashier of the bank. He had courted Miss Dew since 1915, and had worked for the promotion, off and on, since 1907.

He was, in the words of his neighbors, "king bee in these parts." He was president of the Florence Chamber of Commerce for several different terms, a faithful member of the Rotary Club, a member of the volunteer fire department ("$1 a fire"), and a leading light in formation of the Tri-States Tobacco Associates, designed to lift tobacco farmers by their bootstraps and make them all richer than their perverse brethren who wouldn't join. It failed, but Sam became known as a wide-awake businessman. He was credited with building up the assets of the bank to more than $2,500,000, quite a feat in those days in country like central South Carolina.

Dabbled in stocks

HE dabbled in stocks and was buying an interest in the bank when the crash hit. The bank went under, although it was solvent. He went on working in the defunct institution, helping the receivers straighten out the tangles. It was while he was performing this disconsolate work that he received a long-distance telephone call in March, 1932, from Leo Paulger, chief examiner then of the RFC.

Paulger had met him before in work with the Federal Land Bank Board and had offered the Florence man several lucrative jobs, but Husbands had turned all comers down before the bank failure. Now he was ready to go.

"I have a job for you as examiner with the RFC in Washington at $5,000 a year. Will you take it?"

"Yes," Husbands replied. "When do I report?"

He was in Washington two weeks later, one of dozens of examiners in the new RFC. He had nothing, not even a college degree, to push him forward. Nevertheless, he went . . .

His first job was examining and passing on requests for loans to banks, insurance companies and railroads. That fall, he and John McKee, now Governor of the Federal Reserve Board, were placed in an office by themselves and given charge of bank reorganization. They kept busy. More than 9,000 banks failed in 1931 and 1932.

In 1933, Paulger went back to the Federal Reserve Board to work and McKee became chief examiner at RFC. His assistant was Sam H. Husbands. In this position he grew to know intimately Jesse H. Jones, chairman of RFC.

When the RFC started the so-called "preferred stock program," by which it would buy stock in banks that faced failure, Sam Husbands was put in charge. He recommended purchase of stock in some 7,000 banks, investing more than $1,000,000,000. When John

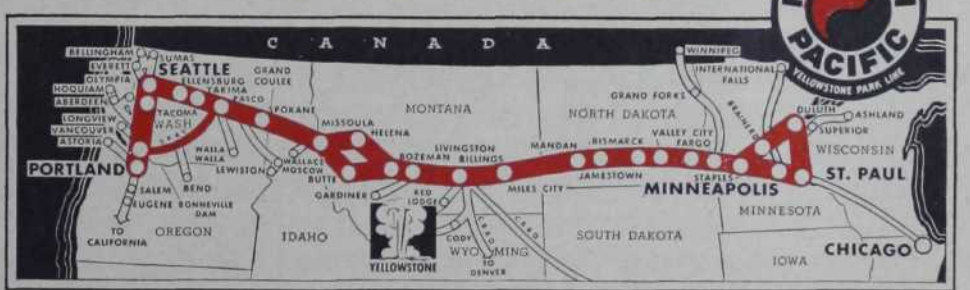
"Nursemaid" to pampered steers . . .



helps move enough beef . . .



to feed 1,058,924 soldiers . . .



via the Main Street of the Northwest!

When it's time to move beef cattle from the grassy ranges of the Northwest to feed lots and markets, cowboys like Frank Waldhauser (top picture) ride right along with the steers in special Northern Pacific cattle trains. Last year these cowboys helped move more than 15,000 carloads of cattle over the Northern Pacific Railway from Minnesota, North Dakota, Montana, Idaho, Oregon and Washington — enough beef to feed 1,058,924 soldiers for a whole year!

This year, as army, navy, lend-lease and civilian needs become greater, still more fine beef is rolling to market over Northern Pacific – Main Street of the Northwest!

NORTHERN PACIFIC

MAIN STREET OF THE NORTHWEST



SUBMARINE BELOW— FLASHES THE CIVIL AIR PATROL PLANE

The indistinct shadow beneath the water means little to the untrained eye—but, the C. A. P. Pilot and his Observer instantly recognize the outline of a lurking enemy submarine preparing for destruction and death. The Pilot's depth charge is soon on its way—the location radioed to the Army, Navy and Coast Guard. The destruction of the raider is imminent.

Former commercial and pleasure fliers who volunteered their services and their airplanes, the men of the Civil Air Patrol have been risking their lives daily since Pearl Harbor in the grim, relentless search for Axis submarines off our shores. Many ships have been saved from torpedoing—many already-shipwrecked seamen rescued—thanks to their ceaseless patrol. To them belongs no small share of the credit for driving the enemy undersea raiders away from our coasts.

We salute them for the courage, ability and self-sacrifice with which they do their job—and we are proud that many of the planes in which they perform this service to the Nation are Jacobs-powered.

JACOBS AIRCRAFT Engines

POTTSTOWN · PENNSYLVANIA · U·S·A·

McKee was appointed to the Federal Reserve Board, Sam Husbands was made chief examiner of RFC. One day, after Harvey Couch had resigned as a member of the RFC board, Jesse Jones asked him:

"How would you like to be on the board?"

"I'd like it, but I doubt if I could make it," Sam replied frankly. "I'm no politician, you know."

"All right," Jones said. "Let's try."

They tried, but Emil Schramm, then an examiner at RFC, now president of the New York Stock Exchange, won the promotion.

When Jesse Jones stepped off the board to become chairman of the Federal Loan Agency, he suggested Husbands as his successor. Congress agreed.

Could earn more

SAM HUSBANDS has been renominated each two years and his present term will not end until 1944. He is one of the three Democratic members of the Board, which, by law, must have two members of the party out of office, also.

His only salary, $10,000 annually, is paid to him as a member of the board of the RFC. But don't measure his ability by his salary. Not long ago, an emissary of one of the big railroads told him: "We will give you $45,000 a year to become vice president of our line."

"Can't right now," Sam replied.

"Why not?"

"Too many other men are leaving their jobs now to serve the Government at less pay. I don't think I should take advantage of the knowledge I have gained to go into private business right in the middle of the wah, do you?"

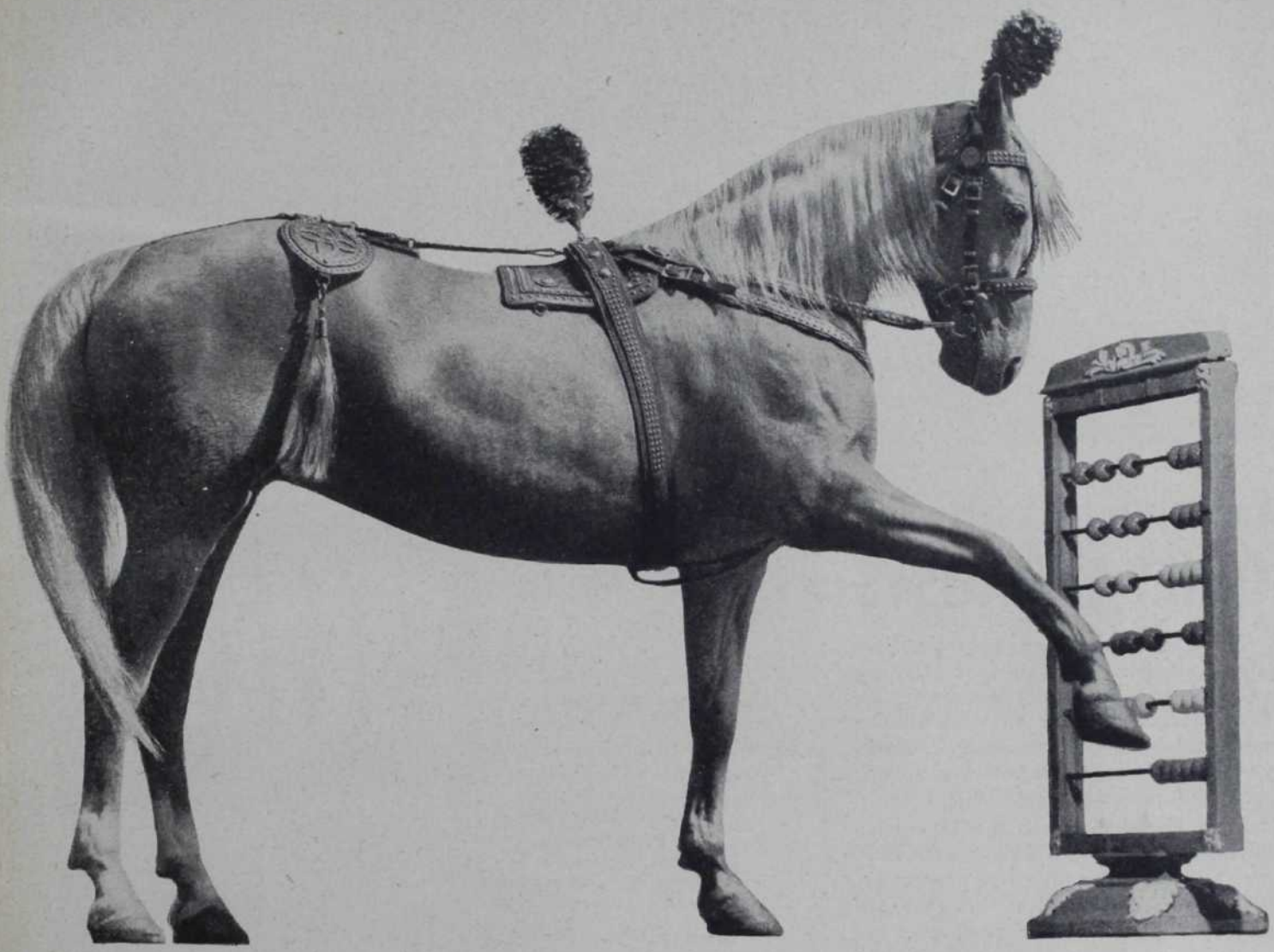
Sam Husbands has large black eyes, thick, straight, closely cut black hair. He is built like an athlete, but takes no exercise other than working in his victory garden behind his home in Chevy Chase.

He is just under six feet tall, weighs 180 pounds. He is a forthright speaker in a small group, but will not speak in public, not even to the Florence Rotary Club. He dresses like a conservative businessman, but you will find him in shirt-sleeves in his office.

His large office reminds you of a museum. On two large tables, he has samples of ores, raw and finished, which are mined, processed, or manufactured in one or the other of the various "plancors." He has chunks of magnesium that weigh more than 50 pounds and plastic watch parts and metal screws so small that some persons cannot see them with the naked eye.

The Husbands have two children—Patricia Chappel, 18, freshman at the University of Richmond; and Sam, Jr., 15, recent graduate from a Washington junior high school.

The parents do little entertaining, and he never goes to formal society functions unless he has to. They both have a nostalgia for Florence, but aren't planning to go back for some time. Mr. Husbands still subscribes to the *Florence Morning News-Review*.



TERRY *the horse with the comptometer-mind*

Several years ago, a farmer discovered that one of his work horses could add and subtract numbers up to ten, which is considerable smart for a horse.

But the farmer allowed that horses were supposed to be plough pullers and not cost accountants, so he up and sold the critter to a circus.

The circus changed the horse's name from Dobbin to Terry, and billed him as "The horse with the comptometer-mind." In no time at all, Terry was a sensation from coast to coast.

But one day a man with a briefcase walked into Terry's stall. He looked and spoke official-like.

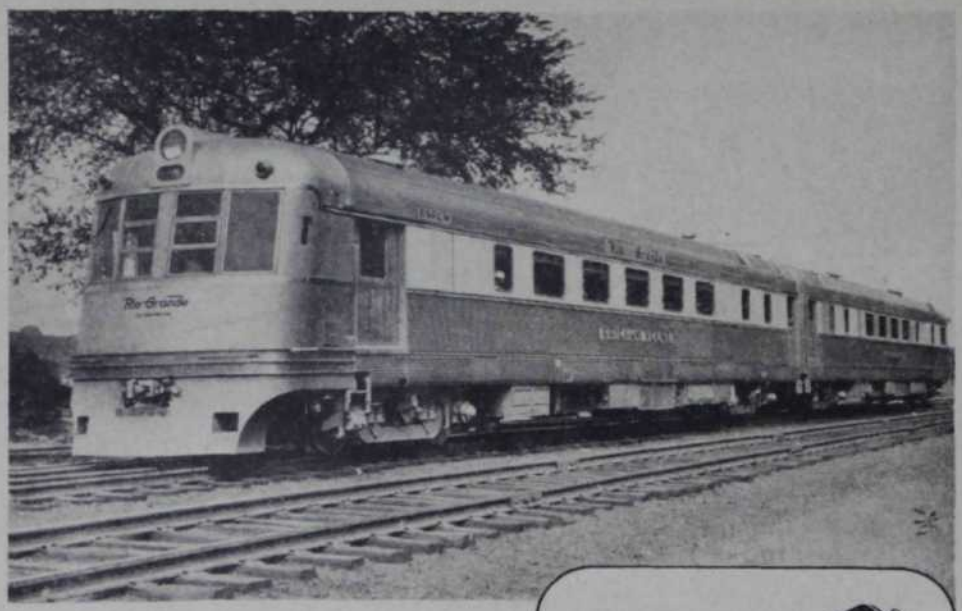
He explained that "Comptometer" is a registered trade-mark, owned by Felt & Tarrant Manufacturing Co., and should be spelled with an *upper-case* "C." It is *not*, he insisted, a generic term. He presented Terry with a cease and desist order.

Terry listened to the man for a good while, and then kicked him ears over tincups. A little later a riot squad arrived and removed Terry to the local Bastille.

Today, Terry is a decrepit old plug. If it weren't for the rubber situation, he would probably be unemployed. Two butchers have already looked him over and said nix. He hauls a milk wagon, and counts milk bottles just for the hell of it.

And he still doesn't understand why the word "Comptometer" can't be used by everybody.

Felt & Tarrant Manufacturing Company, 1712 North Paulina Street, Chicago, Illinois, makers of Comptometer Adding-Calculating Machines.



Engines on wheels need QUIET EXHAUSTS

Diesel rail cars and two-car trains have come to be fairly common in the last few years because they offer fast service on flexible schedules, and are adaptable to suburban and short-line service. To provide pleasant riding for passengers, such cars need quiet exhausts.

Most Diesel rail cars now in service have their exhausts equipped with Burgess Snubbers, because they *prevent* exhaust noise. Snubbers provide all types and sizes of engines with quieter exhausts than are obtainable with old style "mufflers." Acoustic Division, Burgess Battery Co., 2823-F W. Roscoe Street, Chicago, Ill.



Burgess Snubbers are found in service all over the nation in a wide variety of applications, such as:

—rail cars
—industrial power plants
—municipal power plants
—marine engines
—oil field engines
—refineries
—mobile power plants

Their use has made Diesel power widely acceptable because they eliminate exhaust noise.

Originators of Snubbing Principle for Quieting Diesel Exhausts

BURGESS DIESEL EXHAUST SNUBBERS



BUY MORE UNITED STATES WAR BONDS



Harvester . . .

FACED with a shortage of labor, this farmer works out a way to gather his beets

R. J. FRANCIS, who farms 300 acres of irrigated land near Gibbon, Nebr.—mostly in sugar beets—has licked a big part of his manpower problem.

Along about January, 1942, Mr. Francis began to realize that he was going to be short-handed for the duration. But he made up his mind that, if food was needed to win the war, he was going to do his part to help raise plenty of it.

Day and night, he kept thinking up possible ways to save labor. Finally he worked out and built a sugar beet harvester that not only pulled him through the harvest season, but his neighbors as well.

The machine, a fairly large affair, was built at Harry Schinle's machine shop in Gibbon. The work was done largely at odd times. Most of the material was dug out of junk piles over two counties.

The Francis beet harvester works automatically. It tops, pulls, cleans and loads into trucks five tons of beets in less than 30 minutes.

Four men are required to operate it: one man to drive the tractor that pulls the harvester, one on the harvester itself and two truck drivers.

The beets average ten tons an acre. In a ten-hour day, the machine can harvest 100 tons. To do the same work by hand would take 20 men: 12 to top and windrow, two on lifting machines, two truck drivers and four shovelers on the trucks.

The harvester takes two rows at a time. The topping unit has an adjustable knife which tops and crowns. After lifting points remove the beets from the earth, they are picked up by two revolving spiral brushes. The dirt is removed and the beets roll onto elevator belts and are carried into the trucks. There are two elevators, one for each row.

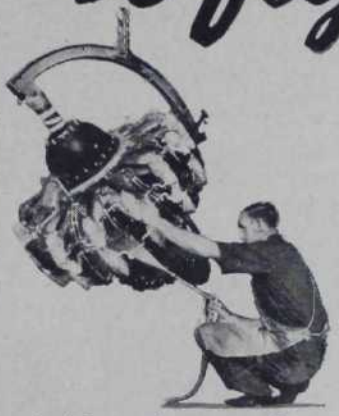
The tops and the crowns from the two rows are pushed together in one windrow to be cured for stock feed.

Mr. Francis has taken the back ache out of beet harvesting in his community. He is planning to put his machine into use over as much territory as possible—and, after the war when materials are available, he expects to build more machines.

—PEARL P. PUCKETT



1200 horses get ready to fly!



ROHR

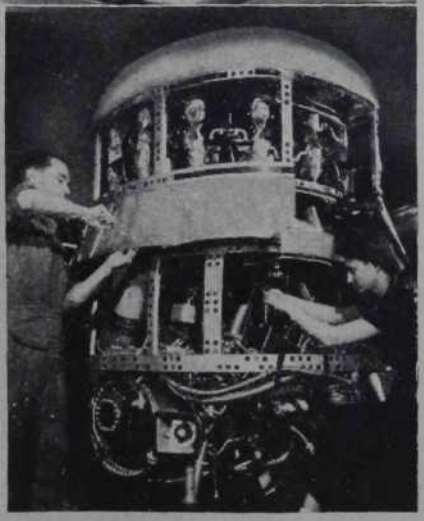
PARTS ☆ ASSEMBLIES

ROHR craftsmen bridge the gap between power plant and airplane with thousands of intricate operations which include both manufacture and assembly.

The painstaking precision of their work contributes to the stamina and reliability of many of America's famous bombers, cargo carriers and giant patrol planes.

Day and night on Rohr's production lines, huge motors move forward to meet the ever increasing tempo of the war's demands . . . a tempo matched by the high spirit of Rohr Production Fighters who know that speed in the factories saves lives at the front!







HELPING TO WRITE

THE STORY OF TOMORROW



ROHR AIRCRAFT CORPORATION • CHULA VISTA, CALIFORNIA

Spending Won't Bring Prosperity

(Continued from page 27)

expansion of tax revenues and contraction of government expenditures which would accompany a period of prosperity. It was assumed that, when the national income reached $75,000,000,000 or $80,000,000,000, budget equilibrium would automatically be achieved.

The next stage in the development of the present doctrine grew out of the business recession of 1937. Beginning about the middle of 1936, business expanded substantially and it seemed that pump priming was really taking effect. But, just when it appeared that at last we might be emerging from depression, the incipient boom collapsed. Meanwhile, however, expanding national income had increased tax revenues. As a result by March, 1937, the cash deficit had been reduced. It continued low during ensuing months.

Although this improvement in the fiscal situation was strictly in accordance with expectations, numerous exponents of the spending philosophy soon took the position that the depression was the direct result of the shrinkage in the Treasury's "net contribution to purchasing power."

It was at this stage that the idea of multiple budgeting gained popularity—with capital outlays segregated from current expenditures—without too careful a definition of what might properly be included in capital expenditures. About this time, too, emphasis began to be placed on the "assets" created by public debts—whether such assets be tangible properties or intangible services, whether they yield revenues or are simply useful to society. It was held that, whatever their character, all public outlays are really investments.

From this point it was an easy step to the proposition that all increases in public expenditures represent income to someone, and that all reductions in public expenditures represent loss to someone; that "costs and income are just opposite sides of the same shield."

The full flowering of the new conception was delayed until the war paved the way for an unlimited expansion of public credit. Here, as in other countries at war, the vast increase in public expenditures has mopped up unemployment and increased national production. Although precisely the same thing happened in former wars, advocates of the new philosophy of debt appear to assume that something unique has been discovered. We have found, they say, the way to full employment.

It should be apparent that the present war experience has merely confirmed what was already known: that great expansion of employment can be provided by unlimited outlay of public funds. But neither in this nor in any other country has the war experience shed any light on whether public deficits can be continued indefinitely without undermining the financial and economic system. If we are to conclude that internal public debts are of no moment, the conclusion must be justified either by convincing historical or other evidence, or by irrefutable economic analysis.

Those who argue that a constantly expanding public debt is indispensable to prosperity base their case on three points:

1. **That we are suffering from a mature economy.**
2. **That we have a chronic excess of money savings.**
3. **That business enterprises no longer depend to any great extent on the investment markets for funds with which to expand productive capital.**

The establishment of these three propositions was one of the primary objectives of the investigations of the Temporary National Economic Committee. The nature of the evidence submitted and the validity of the supporting analysis will be briefly reviewed.

Mature economy

THE ARGUMENT that the United States has recently reached economic maturity, and that, in consequence, further growth (under private capitalism) must be slow, starts with the assumption that economic progress depends primarily on rapid growth in population and the opening of new productive areas. Conversely, it is held that a declining rate of population growth and disappearance of frontiers checks economic growth.

This assumption ignores the fact that the American frontier disappeared more than a generation ago and that our rate of population growth began to decline as early as 1850. Between 1900 and 1930—the era of greatest economic expansion—the rate of population growth declined steadily. If we look at the world as a whole, the argument that economic growth is checked by the passing of frontiers and the declining of birth rates finds no more support.

The history of Sweden affords a good illustration of the lack of correspondence between the rate of population increase and the rate of economic expansion. During the 30-year period from 1900 to 1930, the population of Sweden increased 20 per cent, while production increased more than 300 per cent. Foreign investments were negligible, expansion being almost entirely internal.

It is obvious that the needs and desires of an expanding population constitute potential markets for the sale of goods and services. But it is equally true that the unfulfilled wants and desires of the existing population constitute potential markets.

If the economic system is operated so as to expand consuming power in proportion to the increase in productive power, there is no reason why a slowly increasing, or stationary, population



"It's a good thing this outfit pays good wages or I'd quit — their shows are so corny!"



"POWDERED DAYLIGHT" for war plants

• A vital chemical of war is "powdered daylight" – fluorescent powder that makes cool, glare-free, shadowless light to speed production in plants throughout America.

Complex compounds called phosphors are pulverized, refined and milled to the fineness of face powder. Precisely blended and mixed with binders to assure even coating, tiny phosphor particles are *fixed* inside the glass tube by high-temperature baking. There, in very low-pressure argon gas and mercury vapor, the "Black Light" magic of ultra-violet rays transforms phosphor energy into visible light more constant than daylight – and just as kind to the human eye.

THE HAND IS CAPTIVE TO THE EYE

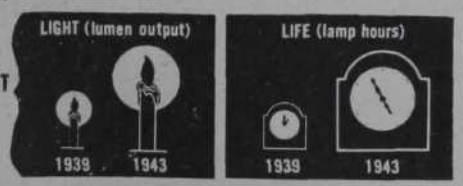
More than ten years of independent research have made coatings with smoother textures a unique feature of Sylvania Fluorescent Lamps. They have also brought other points of Sylvania Lamp superiority: uniform colors, higher light output and longer life – at progressively lower costs.*

Improvements take place every week at Sylvania. Many of them, like the "Mercury Bomb," conserve strategic materials and labor, and at the same time improve quality. All of them serve fluorescent progress, which is aggressively aimed to bring better lighting to industry, commerce and the home when Victory is won.

While today's Sylvania Fluorescent Lamps are serving three-shift days in America's war plants, tomorrow's are being made even better. Specify Sylvania Fluorescent Lamps for replacement and be assured of all the improvements offered by constant research.

FAR MORE LIGHT AND LIFE FOR YOUR MONEY

*Compared with 1939 a dollar invested today in Sylvania Fluorescent Lamps buys more than four times the lumen output and approximately five times the lamp life.



(Based on decreasing price and increasing efficiency and durability of Sylvania 40-Watt White Fluorescent Lamp)

Even on existing circuits, a change-over to fluorescent—Sylvania Lamps, Fixtures and Accessories—will probably more than double the light you get for the same wattage.



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Celotex Insulation Materials can save precious fuel—cut fuel costs as much as 40%.

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Your Celotex Dealer is a good man to know.

CELOTEX

ROOFING—INSULATING BOARD
ROCK WOOL—GYPSUM WALLBOARD
LATH—PLASTER—ACOUSTICAL PRODUCTS

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TO MERCHANTS

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● There's a tried and proven way to build up volume, win new customers, boost your business and make more money. It's the remodeling of your store with a new Pittco Store Front.

Write us today for our free book of facts—and plan to remodel **your** store with a Pittco Front when building restrictions are lifted. Pittsburgh Plate Glass Company, 2276-3 Grant Bldg., Pittsburgh, Pa.

PITTSBURGH PLATE GLASS COMPANY

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should check industrial expansion. And so long as a large proportion of our population is "ill-housed, ill-clothed, and ill-fed," it is not difficult to determine the kinds of additional production which the population most needs.

The adherents to the "mature economy" philosophy overlook the vast continuing potentialities for capital development. Intensive industrialization, together with some new industries, offer large outlets for investment.

The capital requirements over the next generation loom fully as large as those of any preceding period. On the basis of projected population trends, some authorities estimate that the United States may have by 1980 as many as 187,000,000 inhabitants. To supply the primary needs of the additional population, and at the same time to raise the standards of living of the entire population, say 100 per cent, would require a much larger annual capital expansion than we have had during any comparable past period.

In making this statement, allowance is made for the usual rate of increase in man-hour productivity resulting from technical progress. The realization of the production program involved in this expansion would necessitate the employment (on a 40-hour-week basis) of a larger proportion of the total population than was employed in 1929.

Concern has at times been manifested over the possibility that, in the future, we may lack the accelerating influence which flows from the development of great new industries. Observers in the 1880's had strong doubts of the same kind. Even at the end of the First World War, few could foresee the full influence of such developing industries as the automobile, electric power, and radio. At present more potential developments are on the industrial horizon than were discernible then—synthetic fibers and textiles, plastics, television, electronics, glass, pre-fabricated houses, etc.

The full realization of the constructive possibilities will, of course, depend on the restoration of political and economic stability in the world at large, and the elimination of numerous sources of economic maladjustment and confusion within the United States.

Excess Savings

THE PHENOMENON of "money savings in excess of investment outlets" is related to the mature economy conception. If, because of the disappearance of frontiers and an arrested population growth, further private capital expansion were impossible, then obviously we would have no private investment outlets for the current savings of the people.

But independently of a mature economy, it might still be possible that the volume of current savings had become greater than productive capital investment could absorb. It is contended that the evidence supports the thesis that henceforth savings are always likely to exceed productive outlets in private enterprise; hence public flotations must fill the breach.

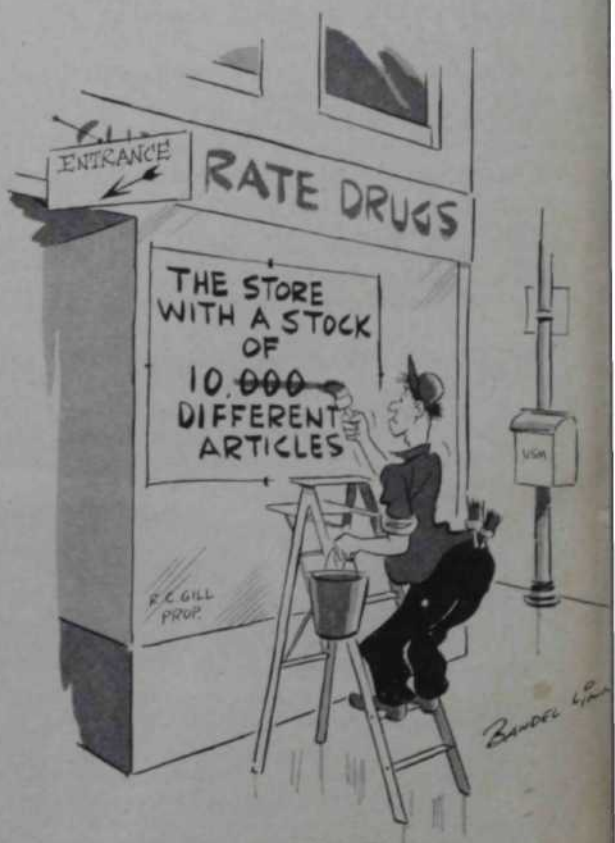
The fact that we had excess savings in the United States in the decade of the '20's was established by the writer, but the income distribution and savings pattern of the '20's no longer exists.

During the decade of the '30's we had in this country a veritable revolution in the distribution of national income. The lowest income groups have been assisted by relief payments. Farmers have been subsidized, wage rates have been progressively increased, and a program of social security and old-age benefits has been established.

At the upper level, profits have declined somewhat, and salary and bonus payments have been appreciably restricted. As a result, both the aggregate volume of savings and the percentage of the national income directed to savings channels have been materially reduced. Department of Commerce figures show a decrease in the ratio of private savings to national income from about 12 per cent in 1929 to an average of 7.5 per cent in the four-year period, 1936-'39.

It is contended that the social program of the past decade has had little, if any, effect on the volume of money savings; that the "consumption function" shows a remarkable stability, and that it is not easy to achieve a high consumption economy except by slow adjustments. National policies, such as the redistribution of income through taxes are admitted to work in that direction.

We are told that "we have to recognize that we are dealing here with a function that is highly stable and not easily changed." As evidence we are told that, in the late '20's, consumption equalled about 88 per cent of the national income—and that in the late '2[illegible]'s, it was





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. . . today and tomorrow

Only one American in many thousands is privileged to wear the "E" pin, symbolic of high achievement on the production front. It symbolizes skill and determination above and beyond the high average standard set by American Industry. ' ' ' The men and women of Connecticut Telephone & Electric Division have been honored by the Army-Navy Production Award twice in a period of six months. This symbol of a job being well done in the cause of Victory is evidence, too, of what may be expected when the war is won. ' ' ' The manufacturer seeking cooperation in product engineering and improvement, the development of production control, or any problem involving the application of advanced electrical or electronic knowledge, is cordially invited to discuss the matter with our engineering staff.

ARMY (E) NAVY

CONNECTICUT TELEPHONE & ELECTRIC DIVISION

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DESIGN, ENGINEERING & PRODUCTION OF PRECISION ELECTRICAL EQUIPMENT

still 88 per cent. The implication is that the remaining 12 per cent in each case represented funds available for private investment.

But the method employed to prove the case leaves out the vital factor. A comparison of consumption with total income ignores the increases in taxes. With the method employed, no matter how great the increase in taxes, the percentage of national income set aside for private savings would not change appreciably.

To illustrate by an extreme example: If we had a national income of $100,000,000,000 with $88,000,000,000 of consumption and no taxes, the amount available for private investment would be $12,000,000,000. If, later, we had a national income of $100,000,000,000 with $88,000,000,000 of consumption and $12,000,000,000 of direct taxes, no money would be available for private investment. Yet the ratio of consumption to total national income would still be 88 per cent.

When the proportion of the national income *saved* dropped from 12 per cent in 1929 to about 7.5 per cent in the late '30's, the difference was accounted for chiefly by increased taxes—which fell largely on the groups, which normally save the most. The aggregate volume of money savings in the late '30's was scarcely half that of the '20's.

Notwithstanding the decrease in the ratio of money savings to national income, private investment outlets in the late '30's were still inadequate to absorb all current savings. The continuing maladjustment is, however, *not* a reflection of an exceptional volume of investment money, but rather of a restricted amount of new capital opportunities. If we had a resumption of anything like the former rate of long-term capital expansion, the excess of current money savings as compared with new security flotations would quickly diminish.

Capital Markets

THE TNEC investigations tried to show that, in recent times, business corporations have "largely freed themselves from the necessity of raising funds in the financial markets," the bulk of the investment funds required now being obtained from their own internal resources. Accordingly, even if private business were reasonably thriving, it would still be necessary for the Government to provide outlets for the current savings of the people through continuing flotations of government bonds.

Evidence submitted by a number of witnesses before the TNEC emphasizes that, whereas approximately 18 per cent of the gross expenditures for plant and equipment in the period 1925-'29 was financed from new capital offerings, only about eight per cent was thus financed in 1936-'37. From this the following conclusion was drawn:

"It is evident that business enterprises rely relatively little on the capital market for their investment funds. . . . Moreover, there is reason to believe that the role of the capital market is declining in terms of a long-run trend. It is true that we do not as yet have an adequate statistical basis for the calculation of a long-run trend in view of the incomplete recoveries of 1936-'37 and 1939-'40."

This conclusion is entirely misleading.

Gross capital expenditures include outlays for maintenance and replacement, as well as for new plant and equipment. It is an elementary principle of accounting and of business operation that the replacement of depreciating or wasting assets should be provided from internal allowances rather than out of undistributed earnings or from new capital flotations.

Combining outlays for replacement with those for expansion simply obscures the question. With this method, the corresponding figures for any decade would show that a relatively small percentage of gross capital expenditures for maintenance and replacement, as well as for expansion, was obtained from the general capital market. This is because outlays for maintenance and replacement of existing plant and equipment are always large. In any period of depression, when new capital outlays are subnormal, expenditures for maintenance and replacement of existing plant and equipment would naturally constitute the bulk of the total.

It may possibly be that the dependence on the capital market for expansion money is decreasing—that an ever-larger proportion is being obtained from undistributed earnings—but there is no evidence to support this conclusion. Since available figures for corporations as a whole do not show expenditures for maintenance and replacement separately from those for expansion, one cannot know whether business was more or less dependent on the capital market for expansion funds than in the '20's.

The truth is that we do not know for sure whether business as a whole will depend less on the capital markets in the future than in the past. It will depend on factors which cannot now be fully gauged. That war developments have changed the picture somewhat is apparent from the fact that some of our largest corporations have arranged for large credit accommodations extending over a period of years.

In summary, the view that we have reached a stage of economic development in which continuous deficit financing is necessary, is *not* sustained by the evidence and analysis which have been submitted.

1. **The mature economy assumption** is *not* supported by the evidence.
2. **The argument that we face a permanent excess of savings** is based on a fallacious comparison—that of consumption with national income—which takes no account of increasing taxes and their effect on savings.
3. **The belief that business corporations** have in recent years largely freed themselves from dependence on the general capital market grows out of a failure to differentiate between the replacement of old and the creation of new plant and equipment.

KARDEX sees to it that everything's

"under control"

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68% of Army-Navy "E" winners depend on Kardex Controls!

REMINGTON RAND

BUFFALO 3, NEW YORK

World's Largest Sea-going Force

(Continued from page 30)

transportation had been divided between the Quartermasters' Corps and other army agencies.

The tremendously complex transportation problem which became apparent as soon as the new American Army assumed form, combined with a shortage of ships and with the overworking of railroad and truck facilities. By comparison with the water transportation of the AEF in the First War, it was a power tool to a tack hammer.

In 1917 we had one port of embarkation on the Pacific coast and one on the Atlantic. Today we have 17 or more.

The big transports put to sea with guns mounted on their decks. Their courses are plotted by the day and mile and, unless a convoy is scattered by the enemy or weather, the whereabouts of every ship is known to the watchers on the land, although their radios must of necessity be silent. The transports are guarded by the Navy's cruisers and destroyers and a multitude of the new types of fast little gunboats and by land-based planes.

Two classes of ships

THE infinite variety of vessels in the Army's navy are of two kinds: Logistical vessels which transport men and materials, and tactical vessels. The tactical vessels may not necessarily be fighting craft but they are subsidiary to offensive actions.

The Corps of Engineers, for example, is, during peacetime, engaged in bridging and laying up levees and dredging harbors and servicing the nation's network of lakes and rivers. The rest of us hardly think of them as fighting soldiers, although it is advisable not to make that error discernible when talking to an Engineer.

The truth is that on land the Engineers are likely to lead the way for the doughboys. They have the job of putting pontoons across rivers and making the roads passable for the heavy artillery.

During war the Engineers have a fleet of their own. Recently the Engineers' Amphibian Command was organized in regiments of three types—boat, shore and maintenance units. The last pair keep the equipment in combat condition. The boat units do not differ greatly in the eye of the landlubber from the Marines. They have pontoon boats, assault boats, little rubber washtubs that carry only one man and huge ones which splash along under the drive of immense outboard motors and can easily carry a fully loaded truck.

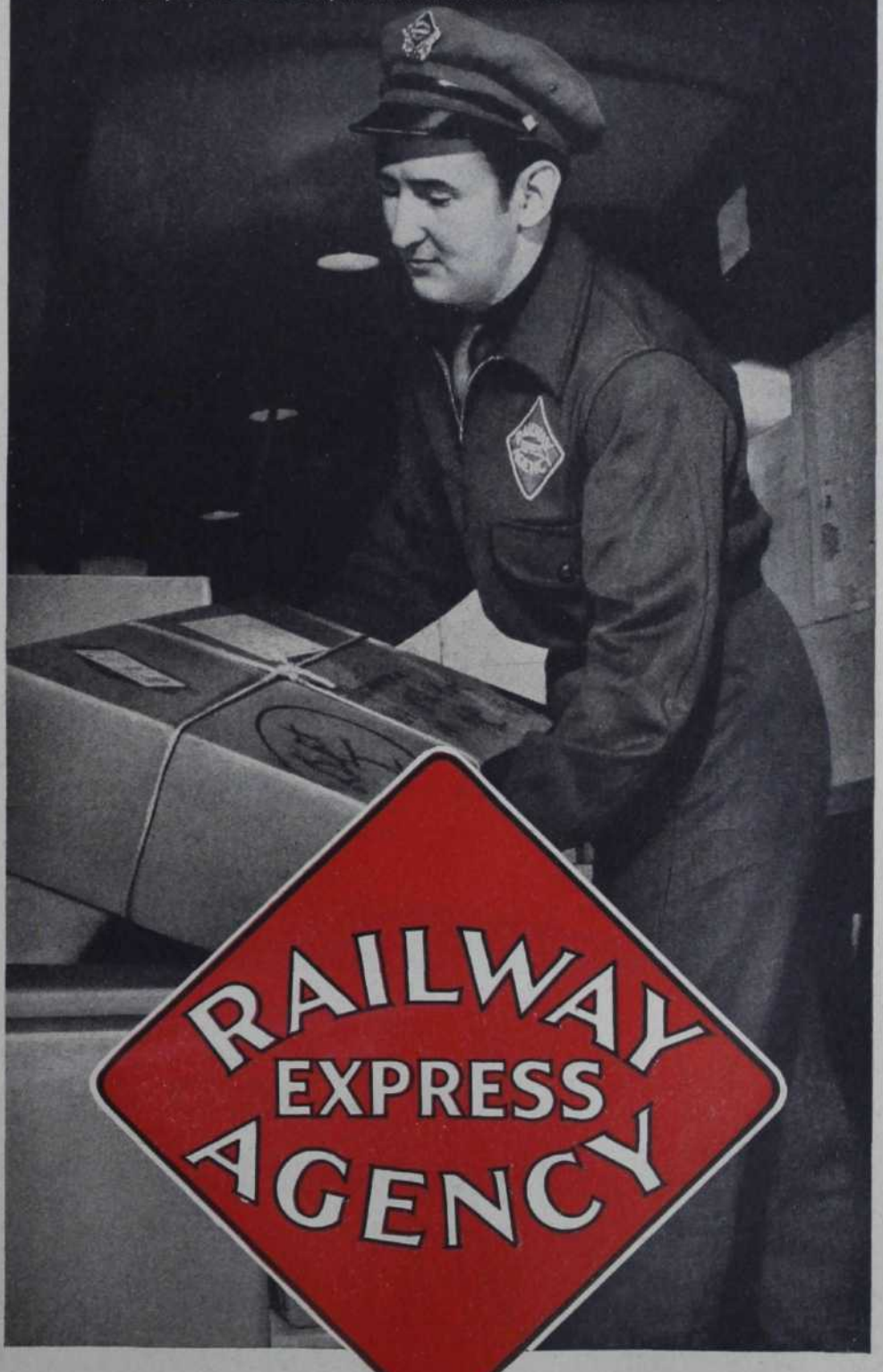
All the Engineers' boats are heavily armored, well-armed and able to take on a little more than their own weight anywhere. Not enough sea-going Engineers were available when the war began, and so the Engineers' Amphibian

AL, THE MESSENGER...

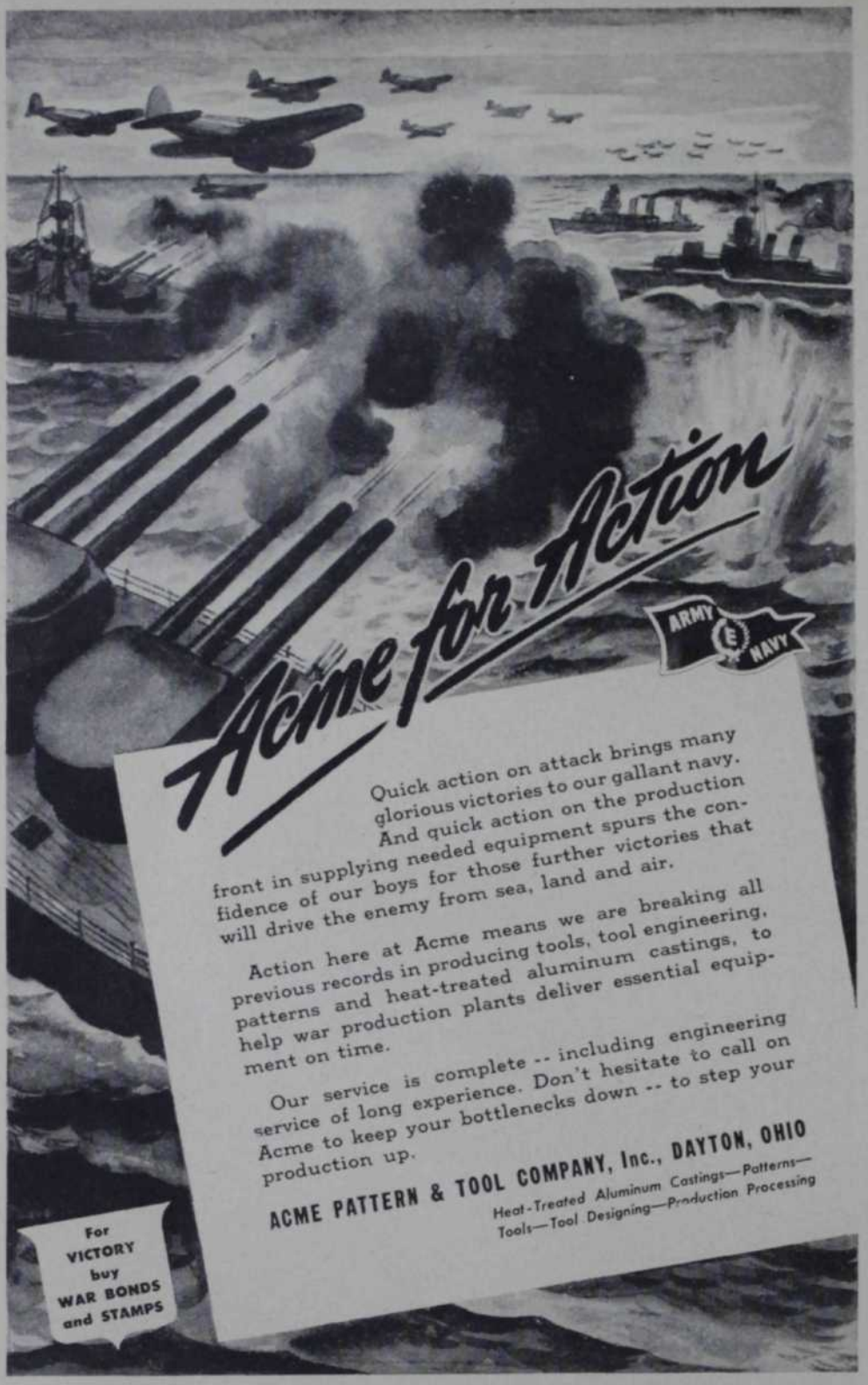
The distant train beats its tom-tom of approach—and then, with a mighty crescendo of sound, roars on.

Inside the Express car, Al, the Railway Express Messenger is busy. He works night and day to help facilitate and protect the transporting of every package entrusted to his care, so that no valuable time will be lost... loading or unloading at the next station, or the next, or the next.

North, South, East, West... on long journeys or short, every minute of the day or night, wherever trains go, some part of the army of 7,160 Express Messengers is always at work... helping Railway Express provide its fast, nation-wide service.



★ *Use AIR EXPRESS for Super-Speed at 3 miles a minute!*





BUY MORE
UNITED STATES
WAR BONDS

Command set up schools. One does not hear much about them, but not long ago the Engineers staged extensive sea-land maneuvers on the Atlantic Coast. Their assault boats nuzzled into the land, the men ripped through the surf, and smashed "enemy" installations in high speed modern style.

It was the Engineers who first saw the value of the outboard motor in military operations. When the crews of small boats in all the other armies and navies were laboriously pulling at 16-foot oars, the Engineers installed the detachable motors, and now a myriad uses have been found for them. They are used to operate ferries, shove skiffs around, and shift heavy barges in rivers and harbors. All in the Army. The Engineers favor the new rubber boats over yesterday's highly modern aluminum craft for many operations. The blown-up doughnuts can take bridge sections designed for loads up to 12 tons.

During that period when Americans thought it was safe to forget about the Army, the Coast Artillery Corps was not favorably remembered. All that most of us knew of the CAC was that when its big guns on Sandy Hook were given their periodical try-out all the windows for miles around blew into fragments.

That is a tough job for any man's army. The mine-layers must be able to go out in any kind of weather and come back again. A mine is a touchy thing. It must be lowered—just so—and put in the right spot even if the boat alternately zooms like a barn swallow and then dives like a loon. The time comes when mines must be withdrawn, serviced and relaid. If the boat does not respond, the mine might bang against its bottom with unpleasant consequences.

Along with the mine layers are box boats which plant and service the control boxes which are wired to mines and thence to the lookout post on shore.

The Army is building the largest small boat navy in the world. The organization of the Assistant Chief of Transportation for Supply, Col. Harry A. Toulman, Jr., does the complete job of designing, buying and producing ocean-going vessels from 16 feet to 225 feet, and from 45 H.P. to 1750 H.P.

Least-handsome ship

THE least-handsome type of boats in Army service is the barrage ballooner. It has no engine and is anchored where barrage balloons might be useful in the event of invasion by air. Apple-bellied, flat-decked, but sound, these boats provide the maximum of monotony for their crews.

The Army's Air Corps crash boats are —unless something new is put in service before this appears in print—the fastest service boats afloat.

The crash boats are built of wood—for shipbuilding reasons too technical to be touched on here—heavily engined and shaped for speed. Even in the rough waters of the English Channel these boats have rescued many men of the A.A.F. and the R.A.F. They run from 42 to 104 feet in length. The A.A.F. fleet is

augmented by the big 188-foot retrievers, steel-built for mid-Atlantic work. Recently the Air Force has had turned over to it the considerable fleet of such vessels that had formerly been operated by the Quartermasters' Corps.

Apart from certain experimental vessels, utility craft, and others which may not be mentioned for reasons of military security, the army craft are divided into 44 categories. They include anti-submarine patrols, self-propelled barges, knockdown lighters that go as deck cargo from port to port, crane carriers, tankers, fire boats, dingies, skiffs and launches. Big boats and little boats. They were built almost everywhere. Some are being put together today in little boatyards on the coasts by old men who thought they had retired years ago.

A proper boat-builder is part artist and part artisan. He shapes a boat partly by blueprint but largely by feel. Young men and carpenters are brought in to do the rough work, but the old men provide the loving-kindness. Hundreds of boats are being built on river and lake banks. Some are hauled across country on specially built trucks. If any proof were needed of the extraordinary ability of Americans to turn their hands to almost anything, the boat-building program of the ASF might be offered.

Washington Ditties

By BERTON BRALEY



Still and All—

Despite the welter of Washington,
Much mighty labor is being done
By men whose courage and strength of mind
Routine can't fetter, nor red tape bind;
Big men, little men, working for
One stubborn purpose—to win the war.
And though there's fumbling and waste, it's true,
The drones and loafers are very few.
So though we critics may have our fun
With boobs and bunglers of Washington,
Most of that "bureaucratic mob"
Are pretty earnestly on the job
And doing as well in their modest way
As the rest of the folks in the U. S. A.



"THAT'S THE STUFF
that will win the War—

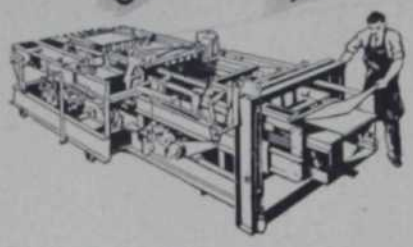
These are the materials that are accorded preferential movement. Until the War is won they must have right of way."

While this is being done the Seaboard may not in every instance be able to maintain the same standard of service on commercial traffic as in normal times. Therefore, if your shipment should be late, we rely on your indulgence and continued cooperation. Seaboard maintains Service Agents in many strategic cities to assist in your transportation problems. We invite you to enlist their aid.

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ALAMEDA, CALIFORNIA

Chinese on the Job

JANG SHOON ONG, former waiter in a Newark Chinese restaurant, faced John A. Nelson across a desk.

"I took a course in the Essex County Vocational School machine shop," he said.

Mr. Nelson, personnel manager for the Federal Telephone and Radio Corporation, needed workers for the company restaurant but he needed them worse in the plant. Soon Jang Shoon Ong was wiring and assembling communications equipment with such skill that Nelson called Joseph Abbott, his assistant.

"Get me more Chinese-Americans like him," he said.

Within a month 65 Chinese-Americans were taking instruction in the company's training school—a situation, according to C. Chia-I Cheng of the Chinese Consulate in New York, unparalleled in the East.

Today 145 of these quiet, industrious people are employed throughout the company's 16 plants.

First, after Jang Shoon Ong came Thomson T. Tong, with a B.S. in electrical engineering from Nangyang University in Shanghai. Today he is doing development work in the company's telephone laboratory.

A little later came Wing Pon, educated at Lingnan University, Canton, in whom Abbott recognized a personality which could be employed to explain to other Chinese the advantage of factory work and how it would enable them to wage a personal war on Japan.

With Wing Pon as an ambassador, Abbott advertised in the *Chinese Journal* and the *China Nationalist Daily* for workers to be trained in the plants while being paid. Pon, a former merchant in New York's Chinatown, interviewed his countrymen in a Chinese restaurant where they felt at home and could ask questions about the company. The Chinese, Pon had pointed out to Abbott, being modest and sensitive people, prefer to work in an organization which is recommended to them by one of their own people.

The Chinese workers are, with few exceptions, American citizens or sons of American citizens. Most are more than 38, therefore are draft-deferred. Those educated in this country speak English with a dash of slang to season it. Others educated here and in China are bi-lingual; some speak little English.

The Chinese workers have a strong desire to contribute to the allied cause. They manifest this in their eagerness to work, in their excellent attendance and their ardent participation in the plant's War Bond purchase program. They believe, they have indicated, that China will be an industrial nation after the war, and that anything they can learn mechanically now will be of use in the future building of China's industry. And they take pride in working in a new occupation.

In the Federal Telephone and Radio Corporation these men, admitting that they are not mechanically minded by heritage, though they love the magic aspect of mechanical things, go through a complete changeover of occupation with a typically Chinese realistic viewpoint of the situation. They talk little or not at all while at work, and are not easily distracted.

Foremen are clamoring for Chinese-Americans to be placed in their departments because they have a reputation for needing to be corrected only once. When they make a mistake they say, "Sorry, it won't happen again." It doesn't. —HENRIETTE BASSOE



"It's for our good work in checking soil erosion"



WE'RE HELPING *Wing the way* TO VICTORY

Over the world fly the winged armadas from America—that the air and earth and sea shall be free.

☆ ☆ ☆

To this winged victory, American Central employees give their strength, skills, resources.

☆ ☆ ☆

With the victory, American Central will about-face to Peace. We shall take up, not where we left off, but with broader facilities, deeper research, higher perfections in the manufacture of home-needed, world-needed equipment. As surely as you see the wings overhead, you shall see freedom and peace and plenty . . . in which "A-C" will take a productive part.

AMERICAN CENTRAL MANUFACTURING CORPORATION

AMERICAN CENTRAL
MANUFACTURING CORPORATION
CONNERSVILLE · INDIANA

New Crops for the New World

By CHARLES MORROW WILSON



GALLOWAY

Hemp is used for making water-resistant, salt-resistant rope. Central America will soon supply us with all the hemp we need



High-yielding hevea rubber trees in Brazil. Millions of hevea seeds are being planted in 16 countries of Central and South America

JAPAN grabbed our sources of vital tropical products, but we will raise what we need in our own hemisphere

BEFORE Pearl Harbor, we imported from the Eastern Hemisphere about 94 per cent of our essential tropical commodities. But Japan changed that.

When, in only 120 days, the Japs seized more than 2,000,000 square miles of tropical and sub-tropical land in the Far Pacific, they got hold of some of the greatest agricultural reservoirs ever developed. They gained commanding control of the production of such things as natural rubber, quinine, hemp, valuable grass oils, etc.

Luckily for us, however, all these crops can be grown successfully in Latin America. The realization that we *must* have tropical products to win the war and to keep the peace—and the fact that these products can be raised in our own hemisphere—has resulted in the biggest and most beneficial shifting of crops in a century.

We are seeing the birth of an entirely new inter-American economy—an inter-dependence based, not on gestures and kind words, but on practical action and commerce. Here is a glimpse of what is taking place:

Rubber: Although the hevea tree, main source of natural rubber, is native to Brazil, the British and Dutch Far East had an almost absolute world monopoly on natural rubber before Pearl Harbor.

Back in 1876, wild hevea seeds were taken from Brazil to London and germinated in Kew Gardens. The seedlings (less than 3,000) were exported to Calcutta, Singapore and other British outposts. From those seedlings grew the 9,000,000 acres of Far East rubber plantings which have yielded more than nine-tenths of all the rubber used since 1920.

Today, however, millions of seeds of selected, high-yielding strains of hevea are being planted in Central and South America. Within 12 years, the trees will produce from 1,200 to 1,900 pounds of crude rubber an acre as compared with less than 300 pounds

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Catalog of Steel-Grip Safety Apparel free on request

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of crude rubber an acre from the wild seeds which were taken out of Brazil in '76.

Hevea rubber can be grown successfully in 16 Latin American countries from Mexico to Bolivia. Henry Ford is producing hevea rubber at Bel Terra, Brazil; Goodyear at Cairo, Costa Rica. The United Fruit Company is planting more than a thousand acres of nursery farms in Costa Rica, Honduras, Panama and Colombia.

Whatever the developments may be in the manufacture of synthetic rubber, we will have available in the future plenty of natural rubber from the American tropics.

Quinine: The safest and surest defense known against malaria is quinine, made from the bark of the cinchona tree. Ninety-five per cent of the world's supply formerly was produced in the Netherlands Indies.

Although some new anti-malaria drugs are on the market today—atabrine and plasmochin—malaria is increasing and estimates are that, in addition to the new drugs, the United Nations will require at least 10,000,000 ounces of quinine a year.

It takes about ten years to bring a cinchona tree to maximum bearing, although some bark can be obtained in from three to four years after planting. Several years ago, Philippine scientists developed a comparatively rough bark extract called "totaquine" (poor man's quinine) which can be made from the bark of wild trees.

High-yielding, cultivated cinchona trees are now being established in Latin America. Guatemala, with an estimated resource of 1,600,000 cinchona trees planted in 1878, is the pace-setter. Seeds from the Guatemala trees are being widely planted by the Colombian Government.

In March, 1943, Costa Rica signed an agreement with the United States to provide 10,000 acres to be planted to cinchona trees under the direction of the United States Department of Agriculture, the whole project to be turned back to Costa Rica in 25 years.

Our Department of Agriculture has recently sent high-yielding cinchona seedlings to Sao Paulo, Brazil; and has assigned foresters to locate wild cinchonas in Colombia, Ecuador, Peru, Bolivia and other South American countries.

Hemp: Manila hemp is used for making water-resistant, salt-resistant, shock-absorbing rope. Hemp comes from the stem of a banana-like tropical plant called abacá, formerly grown in the Netherlands Indies and the Philippines.

A navy or merchant marine without plenty of the right kind of rope is crippled. But abacá grows well in Latin America and is quick-maturing. It reaches harvest age about 18 months after planting.

When the Japs swept over the tropical East, our American tropics lacked planting stock of abacá. In about 1925, however, the Department of Agriculture had brought some abacá roots from the Philippines and had planted them in Panama as an experiment. The United Fruit Company later expanded this seed farm to about 2,100 acres. This became the principal source of abacá seed for the Western Hemisphere.

Early in 1942, the Defense Supplies Corporation bought the seed plantation and contracted with the United Fruit Company to plant 20,000 acres of abacá in Central America for urgent war use. At least 125,000 acres of abacá in the American tropics is needed, and planting is now under way.

Grass Oils: Before the war, the Netherlands Indies had a monopoly on valuable grass oils, such as vetiver, the base of many perfumes; and citronella oil and lemon oil, used in making menthol, soap, pharmaceuticals and insect sprays.

The work of Dr. V. C. Dunlap, a Cornell plant pathologist associated with a Honduran farming company, provides a significant example of how new crops are expanding in the New World. On March 1, 1941, Dr. Dunlap set out 65 heads of citronella grass. By June, the number of plants had grown to 596. By the beginning of 1942, he had more than an acre of the grass. In six months, this had increased to 50 acres—and by the end of 1942, it had climbed to about 250 acres.

By the end of 1943, it will probably be at least 8,000 acres—enough to establish citronella as a stable crop for Central

Washington Ditties

By BERTON BRALEY



For Future Action

I shot a memo into the air,
It fell on a desk, I knew not where,
But it'll be found, when the cannon hush,
Dog-eared, dusty and still marked
"RUSH"
(Endorsed with the initials
Of 99 officials
No one of whom—you said it!—Read it.)

America. Lemon grass also is now being grown in Guatemala. The various oil grasses can be harvested three or four times a year, with oil recovery ranging from 90 to 250 pounds an acre for each harvest.

Rotenone: Rotenone is an insecticide base which has the peculiar property of being toxic to insects and other cold-blooded creatures but not to warm-blooded animals. Thus rotenone destroys enemy insects without impairing the edibility of green vegetables or fresh fruits. Tons of it are used also for ridding livestock of flees, lice and parasites.

Best source of rotenone is the root of the derris plant, a tropical perennial which comes into bearing from 18 to 24 months after seeding. Formerly, Malaya and Java grew most of the world's supply.

When the war broke out, the Department of Agriculture acted quickly to step up the production of rotenone in our own hemisphere. Root cuttings of derris were flown from the experimental station at Puerto Rico to Haiti, Guatemala, Honduras, Ecuador, Brazil and other countries in the American tropics.

Substantial quantities of derris root will be harvested this year; and after this year, it is likely that millions of pounds of the rotenone will be supplied from derris root raised on this hemisphere.

Here again the superiority of the soils and climate of the American tropics is being demonstrated. The highest recorded yield of derris root in the Netherlands Indies is about 2,000 pounds an acre. In Puerto Rico and Ecuador, experimental yields are about 3,000 pounds per acre.

Other crops: Roselle, an important jute substitute used extensively in bagging and cordage, is being planted for the first time in Costa Rica, Honduras and Guatemala by the United Fruit Company on order of the Defense Supply Corporation.

Staple spices, such as vanilla, ginger, allspice, black pepper, and nutmeg, are being re-established in the American tropics on a commercial basis.

In the past, we have always imported cork, principally from Spain, Portugal and North Africa. Except from North Africa, which normally produces about 20 per cent of our cork, we are now pretty well cut off from established sources of supply.

Our Department of Agriculture has been growing cork trees in experimental stations in California. Acorns from these trees are being planted in Puerto Rico, Haiti, Honduras and other dryland areas south of the Rio Grande. Although it takes from 20 to 25 years for a cork tree to reach a marketable age, our cork will be harvested eventually in our own south doorway.

Heretofore, all our teak wood has come from the eastern tropics. But in Honduras, the United Fruit Company is making experimental plantings of teak, as well as of rosewood and tropical cedars which formerly were imported from the war-blocked Far East.

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SANDUSKY, O.

Mr. J. F. McFadden, President
American Credit Indemnity Company
First National Bank Building
Baltimore, Maryland

Dear Mr. McFadden:

Contrasted against the background of credit conditions during the past 50 years, the 50th Anniversary of American Credit Indemnity Company is indeed a notable achievement.

Wars – and there have been many of them – other catastrophes, business depressions, economic changes, all have caused innumerable commercial failures and tremendous losses to creditors. Yet, during the entire period, your Company has continued to reimburse creditors for losses caused by the failure of customers.

For 50 years, American Credit has successfully countered the credit upheavals – not of a single firm or single industry but of all business in all industries. You and your associates with their predecessors are certainly to be congratulated.

May the next 50 years be less troublesome, but may they also bring American Credit even greater success.

Very truly yours,
THE HINDE & DAUCH PAPER COMPANY
Asst. Secretary-Treasurer

LRW:CLW

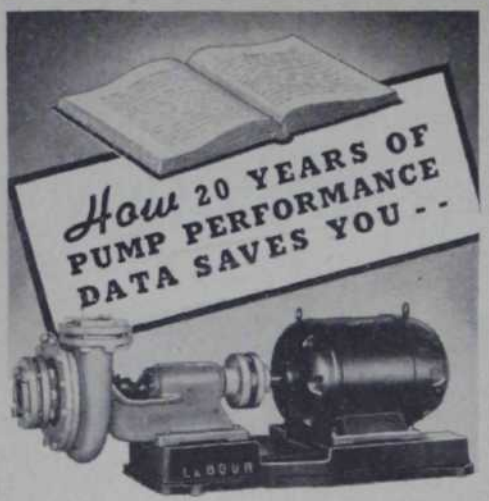
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LABOUR PUMPS

THE Carlton





This "exposition" not only helps a department store solve its help-wanted problem but also aids in building public good will

TODD

New Way to Get Workers

AT THE CLOSE of an uncommonly discouraging day not long ago, Mrs. Frances Ferguson, employment selector for Stix, Baer and Fuller, St. Louis department store, was disposed to tear her auburn hair. There hadn't been a handful of applicants for 200 jobs that needed filling. But, being a woman and, therefore, inherently opposed to tearing one's own hair, she merely scratched it and uncovered an idea, which she took forthwith to William F. Fisher, employment manager of the store.

"Why doesn't this store open a store to hire employees?" she proposed. "In spite of consistently heavy classified advertising in three daily newspapers, we simply are not getting enough applicants to begin to fill the jobs. So why not rent that building across the street and open an employment exposition? If the people won't come to us, let's go to the people."

"I think," said Mr. Fisher, "you have something." So did R. E. LaMar, personnel director.

Stix, Baer and Fuller opened its Employment Exposition on a Monday—and by Saturday evening the store had hired seventy of the 415 persons who had applied there.

In the first seven weeks the exposition was opened, 3,478 men and women applied there for jobs and about ten per cent of them were hired. By comparison, only 2,502 applied at the store's employment office in the same period. Situated on the ground floor of a building at one of St. Louis' busiest corners, the exposition features window exhibits portraying the advantages of employment at the store.

Displaying a smart frock against a home background, one of the exhibits shows how discounts on merchandise keep living costs below average for the company's employees.

Other displays emphasize the low cost of meals in the employees' cafeteria, employee training, sick and disability benefits and old-age pensions, liberal vacation policy, recreational facilities and the company's policy of making promotions from within the store.

"While the exposition has not solved the employment problem, it certainly has eased it," said Mr. LaMar. "Apparently reaching thousands of persons who simply do not read want ads, it is tapping an entirely new market for Stix, Baer and Fuller.

"In addition to its tangible results, the exposition is more than paying its way as a valuable piece of institutional promotion. It is, in my opinion, the most effective means ever used by this company to acquaint the public with its policy of employer-employee relations."

The company, which employs approximately 2,600 persons, plans to continue the exposition for the duration. —THOMAS W. PARRY, JR.



PRODUCT IMPROVEMENT IS IN THE AIR

TODAY our strategically-located factories are 100% on war work.

But even as we fight, Houdaille* management and engineers are anticipating the demands of the post-war world.

Out of this high-pressure war experience we are evolving new engineering and metallurgical concepts and improved production techniques which, in days to come, are bound favorably to affect the things you buy and use.

We will continue increasingly to provide vital, precision parts to the automotive, aircraft, electrical refrigeration, radio, marine, railway equipment, and other important industries—but we will also make substantial contributions to industries yet unborn.

In every Houdaille division, product improvement is in the air—we are doing our share of *forward thinking.*



In your home, on land, sea or in the air—after this war is over—you will enjoy, more and more, the benefits of Houdaille's highly-specialized skills.

HOUDAILLE-HERSHEY CORPORATION

General Executive Offices—Detroit

Peacetime manufacturers of precision parts and mechanisms for the automotive, aircraft, railway, marine, electrical refrigeration, radio, and other industries.

PLANTS AT: Buffalo, N. Y. • Cheektowaga, N. Y. • Jackson, Mich. • Detroit, Mich. • Chicago, Ill. • Decatur, Ill. • North Chicago, Ill. • Muskegon, Mich. Oshawa, Ont., Canada.



*Pronounced "HOO-DYE"

Save Man-Power in Every Department with

APECO PHOTOCOPY MACHINE

Here is a machine that multiplies Man-Power—releasing men, women *and equipment* for other work. Speeds up production! Saves valuable hours now spent on copying and tracing by making photo-exact copies at small expense—in your own place of business, without delays.

SAVES TIME IN COPYING
LETTERS
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WORK ORDERS
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—other papers

Makes Photo-Exact Copies of Anything Written, Printed, Drawn or Photographed

APeCO makes copies up to 18"x22"—1 to 100 copies or more. No chance for error! No need for proofreading! Legally acceptable.

FOOLPROOF OPERATION! STURDY CONSTRUCTION!

With our simple instructions, any inexperienced boy or girl can produce photo-exact copies of letters, blueprints, drawings, etc. No skill or darkroom needed.

PROMPT DELIVERY—Write for FREE folder now! Without obligation, ask to have an APeCO consultant call—located in all principal cities and Canada.



AMERICAN PHOTOCOPY EQUIPMENT COMPANY
2849 N. Clark Street Dept. BR-2 Chicago, Illinois



FOR SEALING OVERSEAS SHIPMENTS IN WATERPROOF CONTAINERS

OF INTEREST TO EVERY EXPORT SHIPPER—this newly perfected water-resistant tape. Its objective—to seal or strap the new waterproof or moisture-resistant containers carrying materials for overseas shipment.

Multiple tests have proven that the tape still adheres to the container *after more than eight weeks of immersion!* Under conditions of high humidity, rain, and actual immersion SOLSEAL Tape fills a real need! Available in 30/30/30, 60/30/30 and 60 lb. Wet Strength Kraft with Solseal adhesive. Also available string-filled for use as strapping tape. Write for *FREE SAMPLE COIL with Solseal Solvent.*

McLAURIN-JONES CO.
Brookfield, Mass.
Offices: New York · Chicago · Los Angeles

We Tour the HOME FRONT

A rayon fellowship has been established at Ellen H. Richards Institute, Pennsylvania State College by American Viscose Corporation, New York City, to study rayon from the consumers' point of view.

Copper is conserved by using duplicate printing plates made of cellulose acetate plastic, the result of a long-term development by Bakelite Corporation unit of Carbide and Carbon Corporation, New York City.

The baseballs used by both major leagues, according to A. G. Spalding & Brothers, Chicago, are now as lively and durable as any made in previous years. Core shells are made of South American reclaimed balata and cork. Domestic horse hide takes the place of Belgian horse hide.

Maintenance workmen at General Electric's Pittsfield, Mass., plant take a "Busman's holiday" at home. When production requirements created an unexpected demand for drills, taps, seamers, saws and miscellaneous tools, these workmen lent a total of 992 small tools from their own chests.

A new world's record in monthly pig iron production from a single blast furnace was set in May according to National Steel Corporation. Their Great Lake Steel Corporation division produced 49,705 net tons of iron, a daily average of 1,603 net tons.

Fifteen million 2-ounce cans containing a formula of several ingredients to be used as a protection against typhus-carrying pests have been manufactured and packed by McCormick and Company, Baltimore, for the Army and Navy.

Buffalo newspapers are carrying on an extensive paid space campaign to recruit new workers for war industries, to reduce absenteeism and to explain management's war-born problems to labor. Plans for the campaign, sponsored jointly by the Buffalo Chamber of Commerce, Western New York War Industries and Labor Organizations, are available from the Buffalo Chamber of Commerce, Buffalo, New York.

Struck by an enemy torpedo ship which damaged the entire engine room, ruptured steam and fuel pipes and lifted lower decks, the U.S.S. Edgar Allan Poe proved the value of welded construction—the bulkheads held and no water reached any cargo space. Only two lives were lost.

In 1939 one merchant ship was launched every 13 days; the rate now is better than five ships a day.

War drains on metals are heavy. In 1929, 67,000,000 tons of iron ore were produced in the great iron ranges of Michigan and Minnesota—in 1942, 91,000,000 tons were produced and it is expected the production from these ranges in 1943 will exceed 100,000,000 tons.

By placing small business concerns directly in touch with larger firms in the aircraft industry, the Army Air Forces Materiel Command, in the past eight months, has been instrumental in the letting of approximately 6,900 contracts to these smaller concerns. This record is matched by the Westinghouse Electric & Manufacturing Company which has awarded approximately $173,000,000 worth of war orders to subcontractors since the inauguration of its "spread the work" policy early in 1941.

The J. Shipman gold medal, given annually by the National Associations of Purchasing Agents as the highest award in the purchasing profession, was presented to Thomas D. Jolly, vice president in charge of engineering and purchases for Aluminum Company of America for his work in connection with the huge expansion program for Alcoa and for the 40 Defense Plant Corporation plants now built or building by Alcoa in 25 different locations.

Thirteen Hartford, Conn., insurance companies have undertaken the task of filling out and mailing almost 2,000,000 copies of War Ration Book 3 to residents of Connecticut.

The ability of a post-war world with higher living standards to utilize easily twice as much rubber as it ever has used in the past, according to John L. Collyer, president of the B. F. Goodrich Company, is apparent when it is noted that the pre-war per capita consumption of rubber was about 3/100 of a pound in China, 3/10 of a pound in Russia, compared to ten pounds per person in this country.



An Offer
TO ALL WAR PLANTS

Conservation of belting, hose and similar rubber equipment is imperative for Victory. The problem is magnified by the strain upon production, the need for educating new manpower, the unfamiliar components of new rubber.

But help is available — from one of the largest plants in the world devoted exclusively to the manufacture of mechanical rubber goods . . . BWH.

Currently, working with synthetics as well as crude and reclaimed rubber, BWH developments from war's demands are accruing which will make BWH post-war products surpass the finest the world knows so well today.

And in the future, as during the past 40 years, BWH will continue and develop its cooperative program of selling its products to industries through the industrial distributor.

This is the great organization that places itself at your service.

BOSTON WOVEN HOSE & RUBBER CO.
Cambridge, Mass.

BOSTON WOVEN HOSE
BWH
BUILT WITH HONOR

One of the World's Largest Manufacturers of Belting, Hose, Tape, Packings & other Mechanical Rubber Goods.

Insure Victory — Buy More War Bonds & Stamps



A THINKING TEAM FOR YOUR BUSINESS

Problem-solving, money-saving teamwork between workers and managers is an accomplished fact today in thousands of American businesses using the Morton Method.

The Method makes a "thinking team" of any organization, large or small, by utilizing *all* available brainpower. It goes directly to employees for valuable ideas which their on-the-job knowledge of a business enables them to think up.

It's been 15 years since Morton introduced the original Method as the basic way of bringing about successful mental teamwork in any business. What that kind of teamwork has enabled American business and industry to accomplish has been especially evident in the past two years.

Ten thousand establishments have employed the Morton Method since its inception. Resulting money savings total in the millions. Forward-looking executives in rapidly increasing numbers are looking to their "thinking teams" for invaluable help in planning for the future—and they're getting it.

Information on how the Morton Method can create the same kind of teamwork in your organization will be sent on request. Write for it today.

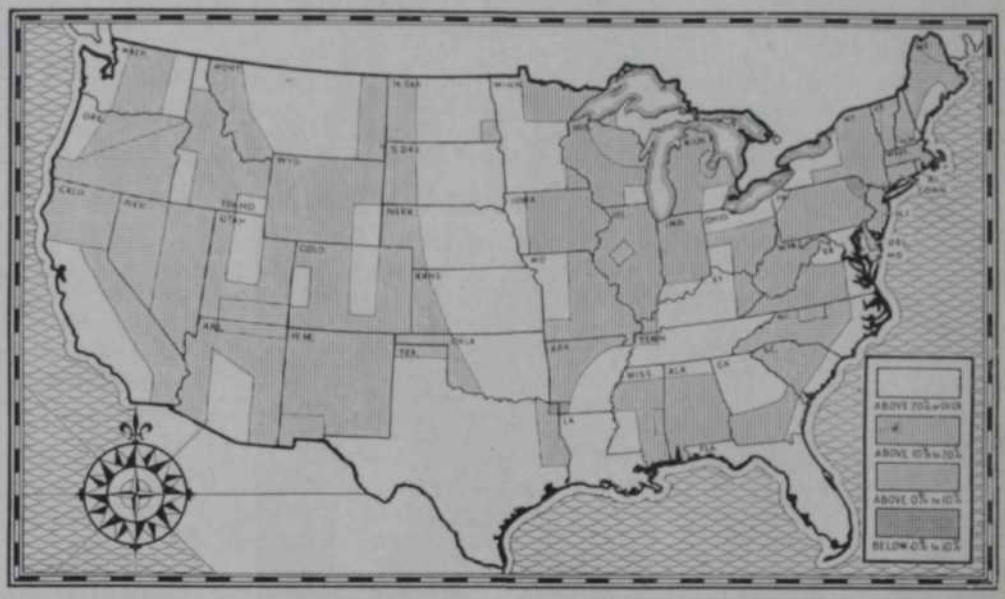


An important instrument for post-war planning.

The **MORTON METHOD**
MORTON MANUFACTURING CO.
SUGGESTION SYSTEM DIVISION
329 N. Leamington Ave., Chicago, Illinois

The *Map* of the Nation's Business

By FRANK GREENE



The Map continues to reflect the high consumer purchasing power resulting from expanding pay rolls and farm income

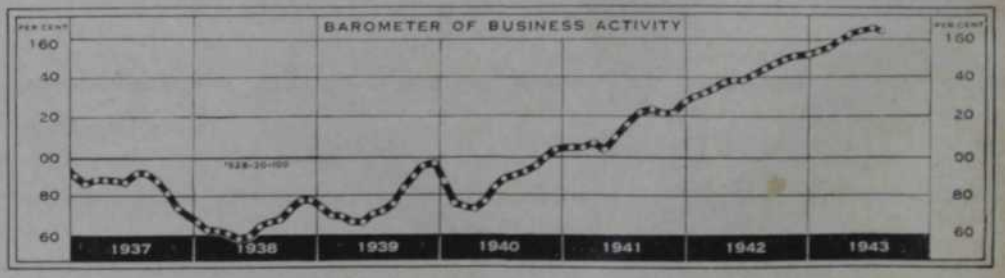
INDUSTRIAL production in June continued at capacity with new advances in output of munitions offset by declining civilian manufacture. Coal strikes reduced total steel production to the smallest since February with the industry operating at the lowest rate in 11 months. Airplane output and shipbuilding continued to expand while automobile plants exceeded all past records under the war production program. Sharply reduced coal traffic lowered carloadings almost seven per cent under a year ago despite increased oil shipments to the East. Three successive weekly records were established in electric output.

Engineering awards continued their declining trend due to reduced war construction despite a 79 per cent increase in private building.

Stock market prices reached highest levels since 1940 after early month declines; bond averages were highest since 1935. Good weather and higher prices held dollar volume of retail sales at the high level of May. Declining farm product prices and better crop prospects caused a down trend in wholesale commodity averages.



The map of last month



Following the levelling off movement of the past few months, the Barometer chart line for June dipped slightly below the high level of May

I WANT UP!

It's dark down here.

It's quiet down here.

It's lonely down here.

No light. Just the glow of emergency bulbs. No noise. Just the ebb and flow of air in our lungs. No talking.

But a lot of thinking.

We're "on the bottom."

They're waiting for us up there. They're listening for us up there. For the turn of a screw, for the clang of a wrench on the deck to tell their next depth bomb where to go.

We're waiting, too. For the sound of their engines to die away or—for the gagging stink of chlorine gas that lets us know our hull is cracked, the batteries are flooded and we're going down in a bubble of air and oil to drown!

Somehow, sweating it out down here in the cold and the dark and the fear, it seems to me I get things straighter than I used to. I see things clear.

I know now what this war's about. I know what this war is being fought for. I want this war over quick—and when it's over, I want up!

That's what I'm fighting for—*up!*

For the right to stand up in the world with my bride by my side and her hand on my arm.

For the right to speak up in my town and have my say and then sit down.

For the right every night to run up the steps of my house back home and pick up and hold a son of my own.

For his right and her right and mine to grow up, to work up in the same America I left behind . . . where there's freedom to breathe . . . freedom to move up to new and better things . . . to look up to the skies and recognize that in America there will always be a limitless opportunity to rise as high, to go as far as courage and strength and ability can take me!

That's how I remember America.

Keep it that way . . . until I come back.

• • •

Here at Nash-Kelvinator, we're building 2,000 h. p. Pratt & Whitney engines for Navy Vought Corsair fighters . . . making intricate Hamilton Standard propellers . . . readying production lines to build Sikorsky helicopters for the Army Air Forces . . . doing our part to keep for our boys while they're away the same America they've always known . . . a land of progress and enterprise and equality for all.

• • •

NASH-KELVINATOR CORPORATION
Kenosha • Milwaukee • DETROIT • Grand Rapids • Lansing



NASH
AUTOMOBILES • KELVINATOR
REFRIGERATORS • ELECTRIC RANGES •

They give their lives; we lend our money.
Buy More War Savings Bonds and Stamps!

The can that Russia rates above guns and planes

A LEND-LEASE AUTHORITY said recently that Russia has been giving our food shipments even higher priorities than guns, planes or tanks!

Most food is going to war in cans—whether it's prepared, dehydrated or dried. And whether it's going to Russia, Britain, China or to our own fighting men all over the world.

Did you realize that our soldiers have a dozen different combat rations—and that most of these are packed in cans?

Without the tin can, lend-lease and military supply would fail. The can is as tough as the Russians. It endures the cold of Iceland, the heat of Africa. It can be stored anywhere, even outdoors.

The can saves food from contamination in bombed areas. It can be dropped without harm to beleaguered forces. And it keeps out water, light, dirt, gas and insects.

Cans for civilians are limited now, but the war cans will be peace cans one day. And better cans! We are learning plenty as "Packaging Headquarters for America at war."

TO MAKERS OF WAR GOODS

Rushed as we are, we can still take on more war work. A part of our vast metal-working facilities for forming, stamping, machining and assembly is still available. Write or phone our War Products Council, 100 E. 42nd St., N.Y.C.



CONTINENTAL CAN COMPANY



HELP CAN THE AXIS
—BUY WAR BONDS